



The Band and Dowel Crown.*

By HART J. GOSLEE, D.D.S., Chicago, Ill.

IX.

Indications. Requirements: Mechanical, Esthetic; Cervical Curvature, Alignment. Color and Harmony. Oil Colors, Manufacturers' Products. Dental Laboratories. Method of Construction: Procedure; Bands, Soldering, Fitting. Forming Cap. Dowels. Bite. Impression. Adaptation of Facing; Cervical End, Incisal or Occlusal End. Backing of Facing; Adaptation. Re-enforcement. Soldering. Finishing. Variation in Method. Use of Platinum. Investing. Soldering. Finishing.

The usefulness and serviceability of the band and dowel crown in the various phases of its present application and construction account for its general and extensive employment, and warrant giving special emphasis, and perhaps some embellishment, to the detail of the respective methods advocated.

While the primitive application of a band as applied particularly to the construction of anterior crowns, and combined with a dowel and porcelain tooth or facing, was probably first suggested by Dr. C. M. Richmond, as previously recorded, the present methods of construction, and the facilities for accomplishing the requirements, have so modified the original design as to cause its complete abandonment, and the adoption of a procedure more practical, artistic and expeditious.

*Copyright, 1902, by Hart J. Goslee.

As this involves innumerable processes, however, only the more practicable of those now in use will receive attention.

Indications.

Because of the necessary use of porcelain for esthetic reasons, and of the additional strength and stability in the attachment afforded by the presence of a band, together with the hermetical sealing of the root and the safeguard against fracture, this style of construction is indicated in, and universally applicable to, the restoration of the ten anterior teeth, and not infrequently the first molars. Within the sphere of its application it occupies the same degree of general utility, and offers the same assurances of favorable permanency that the gold crown does in the restoration of posterior teeth.

Requirements.

As the application is confined to the range of vision, the requirements in connection with the construction of such crowns may be properly classified as *mechanical* and *esthetic*, and yet in all efforts calculated to be productive of a high degree of permanency and artistic endeavor the two cannot well be disassociated.

Whilst it is now generally conceded that the
Mechanical. addition of a band to dowel crowns affords the previously mentioned advantages, it is also readily acknowledged that the mechanical adaptation, or relation, of the same to the end of the root must be uniformly deep, and close enough to the periphery to preserve the continuity of surface between root and crown at the line of junction beneath and within the free margin of the gum, so that no irritating influence may result. At the same time, it is almost equally essential that the band should be of a width sufficiently *narrow* to be entirely invisible, and thus admit of bringing the porcelain into close proximity with the gingival margin; and yet *strong* enough to retain its given shape and form during the process of fitting and adapting, and when subsequently subjected to the stress of mastication.

The importance of properly trimming the end of the root to begin with, has already been sufficiently emphasized, and is particularly apparent in the shaping of anterior roots, because of their even more conical shape. If such is neglected in the slightest degree, the cervical edge of the band must form a shoulder between it and the surface of the root, which, though hidden by the gum, affords opportunity for the lodgment and accumulation of food deposits, the subsequent decomposition of which is productive of a decidedly unhygienic condition, and much consequent discomfort. While nature may aid the indifferent, careless or negligent

operator for a time, by covering over the evidences of such efforts—and in this connection the tissues surrounding roots supporting artificial crowns cover a multitude of sins—the result is inevitable; hence, *no band at all were better than one which does not fit.*

In the esthetic restoration of the crowns of anterior teeth, success, with all it implies, is codependent upon the ability to observe the minutest details in an endeavor to simulate nature, and that degree of enthusiasm and ambition which prompts a thorough and efficient execution of the artistic requirements involved.

These embrace a consideration of the details of Cervical Curvature, Alignment, Color and Harmony.

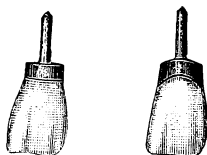


Fig. 122.

In order that the natural cervical curvature of the gum tissue should remain normal, and that no metal should be visible in the finished crown, it is essential that its adaptation should be made with this requirement in view.

A common fault of this kind, the disregard of which materially increases the artificial appearance of the work, as compared with the correct and artistic outline, is illustrated in Fig. 122.

The feature of alignment with adjacent teeth is most important, and particularly as applied to the cervical half of the crown. A common fault with many crowns, otherwise artistic, is an undue prominence at the neck, which is caused by not cutting the labial portion of the root *short* enough, or by the selection of a facing too thick or bulbous at this point, and the failure to properly reduce it, by grinding, before the completion of the crown.

A proper and equally symmetrical alignment of the incisal end should also be observed, and, while the occlusion may govern to some extent, it is often permissible to grind interfering opposing teeth slightly to admit of securing this. In this connection considerable trimming and shaping of the ends and uneven and irregular edges of natural teeth may often be done to their improvement and benefit, and entirely without harmful or

injurious results, if done carefully and judiciously, such surfaces being afterward polished smooth with fine disks.

As nothing in nature is more apparent than the **Color and Harmony.** pronounced evidences of *harmony*, it is, of course, essential in simulating it that every effort should be expended, and every facility employed, to have such obtain in the construction of artificial crowns, that they may more closely resemble the remaining natural teeth.

The selection of a tooth or facing of the proper **Color.** color, with due allowances for any change which may be occasioned by the presence of a metal backing, or other means of diminishing its translucency, is often a difficult and very exacting problem, and those who are so unfortunate as not to be endowed with an accurate and artistic eye will often be seriously handicapped.

The color should be selected with these possible changes in view, and, particularly in the restoration of the six anterior teeth, should usually *match the natural tooth corresponding to the one being crowned* (if present), as a variation in the color of natural teeth in the same mouth is marked, to which special attention has been given in a splendid contribution by Dr. E. C. Royce, of Chicago. If some variation seems unavoidable, a slightly *darker* shade is usually preferable to a lighter one, and effects a less conspicuous and in consequence more artistic result.

The use of the high-fusing oil colors, introduced **Oil Colors.** by Mr. Robert Brewster, of Chicago, or a lower-fusing variety made by C. Ash & Sons, makes it possible to obtain almost any desired variation of shade in a single facing, as well as to more perfectly and artistically imitate the characteristics of the remaining natural teeth. These are prepared in several basal or primary colors, and in obtaining color and shadow effects are to be thinly mixed and painted on the lingual *surface* of the facing, immediately after the grinding has been completed, then placed in the furnace and fused, after which, when the desired result has been obtained, the crown is constructed as intended.

In reproducing pits, grooves, erosion, tobacco stains, etc., the colors are to be painted upon the labial surface, after properly grinding, and then fired before backing.

Harmony in shape, form and characteristics is **Harmony.** scarcely second in importance to color, and at least in salient features should be closely observed, as the artistic possibilities increase in proportion thereto.

The shape and general form of the porcelain tooth or facing should be the same as the corresponding natural tooth (if present); the length

from cervical to incisal edges should be the same as the adjacent teeth; the angles and incisal edge should be characteristic of the remaining teeth, and in the event of the presence of numerous and conspicuous gold fillings the artificial crown should be similarly treated.

Manufacturers' Products.

In complying with such requirements *too* much should not be expected of the manufacturers and supply houses, as it would be impossible for their best efforts to be productive of results which could reasonably be expected to be universally adaptable to all cases. Their products represent only the efforts of the *artisan* in catering to the general demand, and the successful operator *only* can and must become the *artist*.

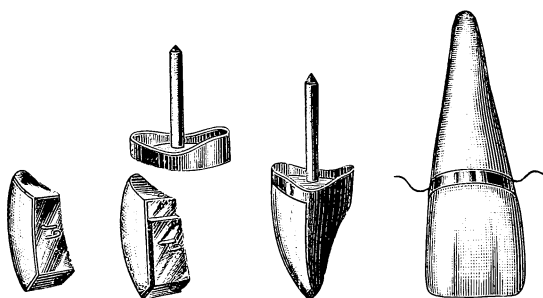


Fig. 123.

A selection which *approaches* the requirements should be made, and then ground and shaped as the characteristics of the case may indicate. In nearly all makes of porcelain teeth this can be done with impunity if the surfaces so ground are afterwards repolished with fine disks, and the result is even more natural than the highly glazed surface.

It is this particular feature that should impel **Dental Laboratories.** the progressive, conscientious dentist to acquire such skill as may enable him to execute his own work, for the practice of relegating this class of work to *dental laboratories*, where, in the majority of them, the motto observed in making *bands* is to have them *large* enough to admit of easy and ready adjustment; where *cusp-forms* are made by the office boy, by the score; where the *color* is but a chance; where accompanying instructions that the *bite* is *normal* will suffice, and where *time* and *revenue* are necessarily the only serious considerations, should be condemned as materially retarding the progress and advancement of an artistic field of labor.

Method of Construction.

In a consideration of the method of constructing this style of crown, the consecutive details of which are illustrated in Fig. 123, special emphasis must again be given to the essentials of root preparation, and particularly to the feature of allowing the end to project about one-sixteenth of an inch from the gum *until the peripheral trimming has been accomplished, the measurement taken, and the band fitted.*

The importance of this procedure has already been sufficiently emphasized, and cannot be overestimated, as a neglect to observe or a disregard of it will add materially to the difficulties encountered therein, and to the degree of inaccuracy and discomfiture resulting therefrom.

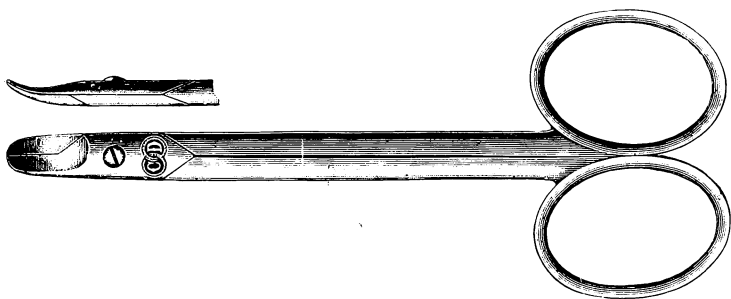


Fig. 124.

Procedure. When the remaining natural crown has been cut to the desired extent, and the projecting end of the root properly trimmed, the measurement should be taken in the manner already indicated.

Bands. A band should now be cut the exact length of the measurement, about *one-eighth* of an inch wide, and of 22 karat gold, 28 or 29 gauge in thickness.

Soldering. The edges should be filed straight and smooth, and the band annealed and made into circular form. By first overlapping and then *abutting* the ends, their contact may be sustained when heated, as already described, and the joint should be soldered from the *inside* with a *minute* bit of 22 or 20 karat solder.

Fitting. The first procedure incident to fitting the band should be to give it a general shape approximating that of the root, and then to trim the cervical edge to closely follow the curvature of the gum, with the joint at the center of the lingual surface. Curved pointed plate shears, or the crown shears especially designed for such trimming (Fig. 124) may be used for this purpose.

When thus trimmed so as to come in uniform contact with the gum when loosely and temporarily adjusted to the end of the root, the edge should be filed *smooth* with the convex surface of a fine half-round file (Grobet, 4 to 5 inch, No. 5), and then nicely *rounded*, always avoiding a thin feather-edge for the reasons mentioned.

The band should now be placed upon the projecting end of the root, and then forced gently to position with a small piece of wood, until it passes just freely beneath the gum. (Fig. 125, A.)

While the topical application of solutions of cocaine, carbolic acid, etc., are frequently relied upon as a means of obtunding the pain, the use of any therapeutic agent is seldom necessary where the band *fits* a projecting end of a properly prepared root, as this serves to first *conform* it to the proper shape, and then *guide* it to place, thus causing little, if any, dis-

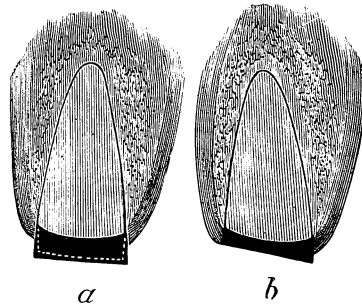


Fig. 125.

comfort. A very great percentage of cases where any acute pain is occasioned can usually be attributed to forcing the band *into* the tissue, instead of its closely following the outlines of the root, and passing under and within the free margin of the gum, without unnecessarily impinging upon the periosteum or peridental membrane.

When the cervical end has been properly adapted, the band should be removed and trimmed down until the *labial* surface is as *narrow as possible* to meet the requirements, but gradually sloping until it is somewhat wider upon the lingual.

It should now be readjusted to the root and forced well to place until it is entirely *invisible* from the labial aspect. The root should *then* be ground down until its basal surface follows the outlines indicated and approximates the edge of the band. (Fig. 125, B.)

While this relation may be obtained by grinding the root down with the band in position, it is usually best to remove the band during the procedure, for the reason that it may become loosened from the vibration, and slip downward unobserved, thus endangering the distortion of its shape;

or, of being ground too narrow to be useful; and the heat produced by the friction is also an objection to grinding and shaping a band in the mouth.

When thus properly trimmed, it should be removed with a small hook instrument, and the floor then attached.

The floor to the band, in the attachment of which

Forming Cap. the cap is formed, should be *thin* enough to be easily adapted to contact with the edge of the band, and admit of bringing the neck of the porcelain facing into close proximity with the gum.

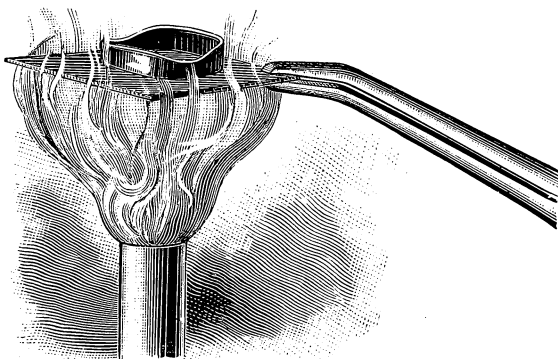


Fig. 126.

For this purpose, platinum, about 34 gauge, is preferable, as affording the desired thinness without danger of being fused in the subsequent final soldering of the parts; although pure gold, or even gold of 22 karat, of the same gauge, may be used.

Any special degree of strength in the floor itself becomes unnecessary in *gold work*, because of the proportion of solder which will be subsequently used in uniting cap and facing, and properly contouring the lingual surface.

In soldering the floor to the band, a liberal surplus of the metal (gold or platinum) should be used, and will facilitate the procedure. The band should be placed in the center of this, without any special effort to secure a perfect adaptation at this time, the parts then fluxed and attached at *one* point of contact by the *partial* fusion of a small bit of 20 karat solder placed *outside* of the band. This will anneal the floor metal so that it may readily be burnished to a perfect contact with the edge of the band; and absolute contact around the entire circumference is essential, as an opening or space filled only with solder may be again opened by the re-fusing of

the solder in the final assemblage of the crown. In securing this contact, however, care should be exercised to prevent changing the shape and form of the band.

After applying flux, one corner of the floor should be grasped with fine-pointed soldering pliers, and again carried to the flame, until the complete fusion of the solder formerly used has united the parts around the entire joint. (Fig. 126.) It will seldom be found necessary to make a second application of solder, for the quantity required, where good contact exists, is almost infinitesimal.

After the soldering has been completed, the surplus of floor metal should be trimmed close to the band, and the joint then finished down smooth, with stones and disks.

When adjusted to position on the root, the cap should rest firmly upon its seat, and any tendency to rock should be relieved. Rocking usually indicates a high point on the extreme approximal edge, the removal of which will overcome the difficulty.

Dowels.

The cap should now be removed, and the canal prepared for the reception of the dowel, the requirements of which have been already outlined.

As the dowel assumes the greater portion of the strain to which the crown will be subjected, the alloy of platinum and iridium is generally used, because of its toughness and strength; and the round, square and triangular wire, in sizes varying from 15 to 18 gauge, according to that indicated by the proportions of the root, are prepared for the purpose.

The so-called "platinoid" and other German silver alloys are also prepared and used for this purpose, but the only advantage possessed by such is that of economy, and this is gained at the expense of stiffness and strength.

If there is any preference as to the *form* of wire used, it is in favor of the *round*, because of its being easier to remove from the canal after mounting, in case of necessity; and of its being perhaps also easier to perforate the floor of the cap in such manner as to secure a close contact between it and the dowel at the line of junction, which facilitates and adds strength to their union, and prevents the solder from flowing in upon the under side of the cap.

The advantages claimed for the square and triangular forms are that a wire drawn with sharp angles possesses greater strength and resistance than a round one; and that any possible rotation of the crown on conical roots, after mounting, is precluded. If the wire used is of *adequate size to*

meet the requirements, the round form possesses sufficient strength, however, and there can be no rotation, if the crown is well adapted and the mounting is secure.

In fitting to the canal a length should be cut which will afford some surplus, and one end then slightly *tapered*. When the dowel has been properly prepared and adapted, the cap should be placed in position and a large round or oval burnisher used to outline the opening of the canal, in the floor. A *small* perforation through the center of this outline should now be made with a sharp pointed instrument, or bur, and the dowel then grasped *firmly* with pliers and the tapered end forced through the floor and into the canal until in proper position, which insures a close contact between dowel and floor.

When properly adjusted, the relation should be *at once* permanently sustained by soldering, to accomplish which base-plate gutta percha, tem-



Fig. 127.

porary stopping, or adhesive wax, should be warmed and packed around the projecting end of the dowel, and over the surface of the cap. When this is cool, which may be hastened by a spray of cold water, they should be carefully detached from the root, and the interior of the cap filled with plaster or investment material, until the dowel is covered. (Fig. 127.) The use of any more investment material than absolutely necessary only adds to the difficulty of soldering, and it is essential that it should be packed down into the cap well to prevent burning the band. After this investment has crystallized, the removal of the temporary medium, by warming over the flame, will admit of securely attaching the parts with solder by the use of the small mouth blowpipe.

In the event of, accidentally making too large a perforation through the floor, an additional piece of the metal of smaller dimensions may be properly perforated and burnished down over the surface before removing and investing the cap and dowel, and subsequently attached at the time of soldering.

The cap should be cleaned in the acid bath after removing from the investment, and then adjusted to position on the root and the bite and impression taken.

"Bite." In the construction of anterior crowns, the taking of a "bite" usually becomes necessary only when some abnormality of occlusion, or irregularity of the opposing teeth, presents. Otherwise the lingual contour of the adjacent teeth as represented in the model will indicate the outlines to be followed by this portion of the crown.

When a bite is necessary, it should be taken in wax, preceding the impression, and should be secured in accordance with the requirements of the impression, and in the manner previously outlined.

Impression. The impression should then be taken in plaster for the reasons already stated, and should always include teeth on each side of the one being crowned, and the *corresponding tooth*, when present.

If the projecting surplus end of the dowel is slightly bent, the cap will be removed with the impression, but in the event of its remaining upon the root, it should be detached and adjusted accurately to position, and securely sustained, if necessary, with a little melted wax. *The interior of the cap and the surface of the dowel should now be covered with a slight film of melted wax to facilitate and admit of its ready removal from the model*, and the impression then varnished and filled.

When the model has been obtained, the bite, if one has been taken, should be adjusted, and the case mounted upon the articulator. The cap may now be easily detached by grasping the end of the dowel with pliers, and the wax then removed from its interior, which will admit of its ready and accurate readjustment, thus facilitating the investment of the crown, and the preservation of the model.

In cases where the remaining natural teeth are quite loose, or support artificial crowns of doubtful stability, the use of small particles of wax packed into the interproximal spaces, and into all undercuts, will be found to be advantageous to the removal of the impression, and to the comfort of the patient.

Adaptation of Facings.

Previous to the selection and adaptation of the facing, the surplus end of the dowel should be cut off with excising forceps or cutting pliers, leaving it as long as possible, without interfering with the adjustment of the facing to its proper position.

As the floor is very thin, however, some little surplus should always be allowed to remain, in order to add strength to the attachment of the dowel.

A long pin facing should now be selected and ground to a *perfect*

joint with the cap, along its cervical curvature, and then to meet the requirements of length, contact and characteristics.

Cervical End. When this required and proper adaptation of the cervical end, to the cap, is secured, the *inner* surface of the facing should be thinned down somewhat until sufficient space exists to afford opportunity for securing a close joint between the backing and the cap, with solder.

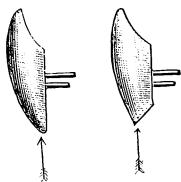


Fig. 128.

**Incisal or
Occlusal End.**

The incisal or occlusal end should now be beveled about half-way to the pins, in order that it may present a *smooth, sharp angle*, instead of the usual rounding edge. (Fig. 128.) This becomes neces-

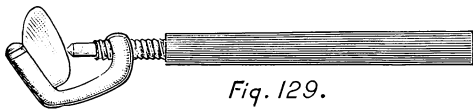


Fig. 129.

sary as a means of affording a definite edge to which the backing may be subsequently finished.

The use of the *clamp* designed by Dr. A. Brom Allen, of Chicago (Fig. 129) will be found convenient for holding porcelain facings while grinding.

Backing of Facing.

The backing of porcelain facings becomes necessary in metal work as a means of supporting them, and of affording a surface for their subsequent attachment with solder.

The requirements in this connection embrace *two* essential features: First, the backing must be *closely* adapted to the porcelain, and, second, it must be sufficiently strong, rigid and unyielding, to protect the porcelain from the strain of mastication

While numerous methods are employed, the following will be found to be productive of the most certain and accurate results, though possibly somewhat less expeditious than the more simple methods usually observed.

Pure gold, about 34 gauge, cut somewhat larger than the facing, and to extend from cervical to incisal or occlusal edges, should be perforated for the ready reception of the pins, annealed, and carefully burnished to a perfect adaptation.

As it is desirable that the perforations should be properly placed, so as to admit of the free and easy adjustment of the porcelain to position, and to preclude any strain upon the pins in adapting the backing, it should first be observed that the pins *are straight and parallel with each other*, and that this surface of the porcelain is clean and free of wax.

As a means of ascertaining the exact position of
Adaptation. the pins, the gold should be laid on a smooth surface and the facing placed over it, pins downward, and sufficient pressure applied with the thumb to make a slight indentation. Or, a thin film of melted wax may be previously placed on the surface to facilitate this, though the same is unnecessary because of the softness and thinness of the pure gold.

The perforations may now be made with a punch designed for the purpose, or with a sharp pointed instrument of proper size. The use of the latter possesses the advantage of throwing up a small furrow of metal around the holes, and is preferable.

After annealing and burnishing the gold to a perfect adaptation, the surplus should be trimmed away to closely follow the porcelain on all surfaces *except* the *incisal* or *occlusal*, where a slight projecting edge should be allowed to remain.

While the requirement of *adaptation* has now been complied with in the best and easiest possible manner, that of *strength* is yet to be observed.

As the strain upon a facing is generally applied
Re-enforcement. directly upon the end, and then diverted to the point of resistance afforded by the pins, it is necessary that a *uniform re-enforcement* extending over this area should be made.

To best obtain this, and thus combine the requirements of *adaptation* and *strength*, a second piece of gold, preferably about 22 karat, 29 or 30 gauge, should be perforated, burnished to place, and trimmed *to extend from the pins to the incisal or occlusal end only*, with a corresponding surplus at the latter point.

The two backings should now be adjusted to position on the facing and reburnished, then removed, placed together with the holes approximating each other, which is facilitated by the furrow of metal produced by being punched with a sharp instrument, and then attached with 20 or 18 karat solder. Small pieces of the latter should be consecutively applied to the

joint between the two, presenting toward the cervical end, until the intervening space is completely filled, which may be easily and quickly accomplished by grasping the backings with the soldering pliers, as indicated in Fig. 130, the use of which securely sustains their relation, and precludes any distortion of shape.

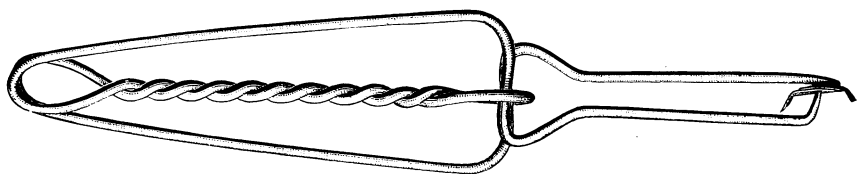


Fig. 130.

The use of an excess of flux should be avoided, and care must be exercised to prevent the solder from filling the perforations, or flowing through to the under side of the backing, and thus destroying the adapta-

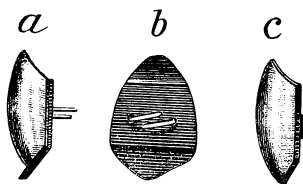


Fig. 131.

tion. The latter may be easily avoided by coating this surface with a solution of whiting, but is usually prevented by the upturned edges surrounding the perforations, which also generally precludes their filling up with solder. The use of small pieces of graphite from an ordinary lead pencil, trimmed to snugly fit, and to project slightly from each side, will also overcome any such tendency.

When the soldering has been completed, the backing should be cleaned in acid, adjusted to position on the facing (Fig. 131, A), and securely retained by bending the pins down close upon it, as indicated in Fig. 131, B. Care must be exercised in bending the pins to catch them with pliers at the *extreme end*, in order to avoid any *stress* or *tension* which might result in immediate or subsequent fracture of the porcelain.

In finishing, the gold should be trimmed down to close contact with the porcelain around all surfaces. This should be started with a fine file, always carrying it *toward the porcelain*; and completed with disks, to insure the re-

Finishing.

removal of all *overhanging edges*, the presence of which *will invariably cause fractures* of the porcelain along the edges, due to the impingement afforded by the shrinkage and contraction of the metal after soldering.

In trimming away the surplus from the incisal or occlusal portion the file should be held on a *parallel line* with the *labial* or *buccal* aspect of the facing. This leaves the backing its full thickness along this edge, the vulnerable point, when it may be afterward *rounded* nicely until practically invisible, and yet always remain sufficiently long and strong to afford ample protection to the porcelain. (Fig. 131, C.) Much of the artistic effect of the finished crown will depend upon obtaining and preserving a *perfect joint* between the neck of the facing and the cap, and while it is the usual practice to grind this portion of the facing thin, and allow the backing to extend entirely over it, forming a joint with the cap which is subsequently filled with solder, the best results may be secured by filing or grinding away this edge of the backing until the *edge of the facing may be placed in direct contact with the cap*.

This admits of bringing the facing into closer proximity with the gum and of securing a better and more perfect joint between backing and cap, because of the difficulty and uncertainty usually experienced in successfully filling this space with solder.

The use of the clamp previously mentioned may also be found serviceable as a means of holding the facing while finishing the backing.

As the double backing may seem unnecessarily **Variation in Method.** difficult or circuitous, various other methods are employed in preference, but probably with results less certain and accurate.

The re-enforcement of the single pure gold backing may be done with a lower grade of gold, or with solder alone, either preceding its final adaptation to the porcelain, or at the time of soldering the facing to the cap. There is no objection to this procedure if *adequate* re-enforcement is secured, but as gold or solder in fusing flows to a *thin edge*, the *edges* of the backing and particularly the incisal or occlusal, where strength is demanded, are quite naturally the thinnest, and consequently the weakest portions.

This may be overcome somewhat by allowing a slight surplus to extend beyond the porcelain, especially upon the incisal or occlusal end, until after re-enforcing, and then adjusting to position on the facing, and securely attaching and finishing, as indicated. In no event, however, when a single pure gold backing is used, is it advisable to defer the re-enforcement until the final soldering of the crown.

Where a single backing seems indicated or desirable, it should be made of 22 karat gold, about 28 or 30 gauge, but as the burnishing to the

porcelain is thus made more difficult, the additional stiffness and strength is usually obtained at the expense of the adaptation.

The adaptation of heavy single backings may be materially improved by swaging. For this purpose a mould of the lingual surface of the porcelain should be secured in mouldine, and fusible alloy dies obtained, and dies made of ordinary sealing wax, or hard modeling compound are also sometimes used. This consumes even more time, however, than the adaptation of the double backing, and the results are less accurate.

As porcelain facings are more or less translucent, **Use of Platinum.** the presence of a gold backing is frequently objectionable in the blue and lighter shades, because of the yellowish cast imparted to them; hence the placing of a surface of platinum next to the facing is sometimes indicated as a means of preserving the original color, or of effecting the least, or most desirable, change in it.

For this purpose, *platinized gold* is employed, and possesses the advantage of affording a surface of either gold or platinum, as the case may require. A more convenient method, however, is to back up the facing in the usual manner, and then insert a piece of platinum foil (1-1000) over the desired area between facing and backing, just previous to permanently attaching them by bending the pins, and finishing the backing to its proper adaptation; by which means equally good and perhaps quicker results may be obtained.

When the adaptation and finishing of the backing have been completed, the facing should be adjusted to position on the cap, and the proper relation sustained with wax. The crown should now be removed from the model, and the joint between cap and backing well filled with melted wax. This keeps it clean and free of investment material, which is essential to securing a smooth flush joint with solder, and the latter may be facilitated by using *fluxed* wax.

Investment material should now be mixed to a thin plastic consistency, and a sufficient quantity poured upon the surface of a clean piece of paper. The *interior of the cap* should first be *thoroughly filled*, and the crown then gently forced into the investment, until only the wax remains exposed. After hardening, the surplus should be trimmed to the outlines indicated in Fig. 26, and the wax carefully removed with a small pointed knife-blade, being particular not to loosen the facing in its matrix.

In those cases where the backing has been allowed to extend entirely through between basing and cap some difficulty is occasionally experienced in getting the solder to flow nicely into the joint, and while this may usually be accomplished by properly fluxing and heating the case before attempting to solder, if the proximity of the surfaces is very close the same

may be greatly facilitated by placing a small projecting bead of wax around the immediate outside of the joint, before investing (Fig. 132, A). When melted and subsequently absorbed and burned out, this leaves a small space into which the heat becomes concentrated, during the process of soldering, and which aids materially in drawing the solder toward that point.

The cutting of a small opening through the *under* surface of the investment until the joint is *exposed* is also recommended for this purpose,

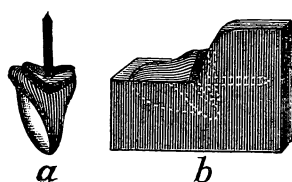


Fig. 132.

and the same may be easily obtained by extending the bead of wax previously mentioned until it is of proportions sufficient to leave such an opening after its removal. (Fig. 132, B.)

In cases where two or more individual crowns, approximating each other, are being constructed at the same time, they should always be invested *separately*, as it is often quite difficult to solder them, when contained in the same investment, without attaching them together.

Previous to heating the case for the purpose of
Soldering. final soldering, and after the investment has been properly trimmed, and all debris removed, liquid flux should be applied to the surface of cap and backing, and worked well down into the joint. If the latter is done after the case is heated, or if powdered flux is used, its penetration to the full depth of the joint is made more doubtful.

The case should now be placed over the flame and *gradually heated until red*, when medium-sized pieces of solder, previously fluxed, should be separately and consecutively applied, and fused, until the joint is first filled, and the desired contour obtains. If the case is *properly heated*, this can be easily and readily accomplished with a small pointed flame from the blowpipe.

When the soldering has been completed, the crown should be allowed to cool slowly by gradually diminishing the size of the flame under it, until it may be turned off entirely. Many prefer to place the work in a cooling

oven, or to submerge it into dry plaster until cold, but either procedure is entirely unnecessary.

After cooling sufficiently, it should be removed
Finishing. from the investment, treated to the acid bath, and then finished with stones and disks in the engine, and subsequently polished on the lathe, when it is ready for mounting.

(To be continued.)





Orthodontia and its Relation to Temperament.

By EBEN M. FLAGG, D.D.S., Philadelphia, Pa.

Read before the Southern Dental Society of New Jersey, March 19, 1902.

The increasing importance of the science of orthodontia prompts me to put forward a few ideas in its relation to temperament, in order to show the necessity of making our operations harmonize with those individual peculiarities which should characterize the patient, presuming his or her denture to have erupted with normal occlusion, and at the outset I cannot too strongly impress upon you the necessity of always having at hand models of normal mouths for constant reference and study.

The model of a normal mouth seems to be one of the rarest possessions of a dental establishment, and yet as there can be no effective study of pathology without first a thorough knowledge of physiology, so any attempt to correct oral deformity without first being well disciplined in a knowledge of correct dental occlusion must end in dissatisfaction to the operator and probable mutilation to the patient, one species of deformity merely being replaced by another, and all because the operator had not appreciated the fact that there is not an elevation nor a depression throughout the whole denture, upper or lower, that has not its corresponding counterpart made to fit into it, and no other.

Errors of Extraction.

When a patient presents himself or herself for an operation in orthodontia, what has generally been the first consideration in the case? Almost invariably it has been, "Let us see what teeth we can extract in order to make room." I repeat, "to make room," for that has been the usual expression, and the making of room has really been only the decrease of room. Dental arches already too much narrowed for speech, beauty or mastication have thus generally been corrected (?) by making them still narrower, and facial contours already too diminutive have thus been restored (?) by being made still more diminutive. In this matter we,

as dentists, are not altogether to blame. We have worked according to our light, which has been so dim heretofore that we did not see what far-reaching results could come of an operation which seemed to be confined merely to the teeth. Now, however, we see that the basis of our etiology is being shifted, and if I am anything of a prophet, I predict that "crooked teeth" will soon be demonstrated to be nothing more than an outward and visible sign of an inward and constitutional disturbance; that the face is not pinched and deformed because the teeth are irregular, but an antecedent lack of development in the face has been the cause and not the effect of the oral deformity.

**Etiological Factors
in
Irregularities.**

The human head and face in their mechanical construction may be likened to a series of arches. The brain cavity from its shape is made so as to resist enormous external pressure, not only from above, and the sides, but also from below, so any undue pressure upon the brain cavity in order to induce morphological changes must come from within rather than without. During adult life, such pressure results in apoplexy, and cerebral engorgement is almost sure to produce death. The abnormally increased blood supply brings about a strangulation, from which the patient may or may not recover. Such, however, is not the case with very young patients. With them cerebral strain may cause an undue enlargement of the brain cavity, the bones of the head at a very early age being more yielding and no part of the human system may preponderate except to the detriment of some other part.

Let us see what part or parts are most likely to be impaired by the condition which we are just considering. The abnormal flow of blood to the young brain that is sure to be occasioned by severe mental tasks, over-excitement, late hours, or errors in diet, must be mostly felt at the cerebrum, since that is the seat of intellectual function, and it is this portion of the brain which is situated just above the internal bones of the face. Now, the anterior portion of the floor of the cerebral cavity seems to be more scale-like or squamous than any other portion. It has not the dense double layers that the parietal, frontal and occipital portions have; thus an undue pressure would be more likely to make the anterior portion of the floor of the cerebral cavity yield. So much for the dynamics of the case.

Outside of dynamical considerations, we must not lose sight of our former proposition, that an unduly excited part, when it does not succumb to the excitement, preponderates to the detriment of some other part, just as a growing tumor starves surrounding tissues, and an abnormally increased blood supply at any given part, while causing defective

development even at a distance from the point of observation, does still more mischief at points contiguous, in that to the general weakening is superadded the dynamic influence already noted. It is difficult to say just at what age this train of evils may have had its origin, whether in the tender years of childhood, or through maternal impression *in utero*, but of one thing we may be pretty certain, that the cause of degeneration, as I have stated it, is in accordance with well known rules of pathology, and does much to account for the puny, undeveloped faces of those patients who come to us for treatment of oral deformities.

The arches of the cranium having been considered, let us now consider the arches of the face; and there are many of them, since anything constructed to resist external pressure must take the form of an arch. There are the convolutions of the turbinated bones, the dome of the

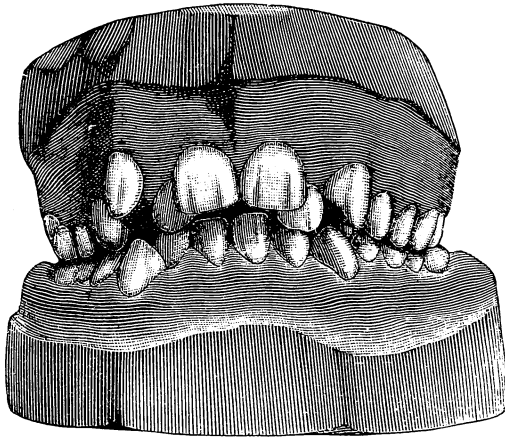


Fig. 1.

antrum, the arches of the superior maxillæ, palatal and dental, all of which are constructed to best resist external pressure, with a minimum of material occupied in their construction; besides we have to consider the nasal septum, which is braced above and below by what appear to serve as two keystones, namely, the crest of the ethmoid and the wedge of the former where it fits in between the palatal bones; but with the pressure downward from above, which I have mentioned, combined with the starved condition of the upper face resulting from defective blood supply and the constant hammering of the inferior maxillary from below, these keystones often prove of no avail; the septum becomes deflected; the vault of the hard palate narrowed and pointed upward; the teeth

thrown into irregularities or thrust forward; the lower jaw protruded or undershot; all the horrors of mouth breathing inaugurated and adenoid growths alternate with rhinitis and nasal catarrh. I have not time to elaborate this matter here, but to those who would see the details of the process scientifically put forth, I would recommend them to read an article on deflected and deformed nasal septa by Nelson M. Black, M.D., and published in *American Medicine*, under date of February 15, 1902, for it is an article with which every orthodontist should make himself familiar.

**Thumb
Sucking.**

If our course of reasoning up to the present time has been correct, it will be acknowledged that the lower jaw is thus the last link in a long chain of deformities. In reaching for an occlusion to the

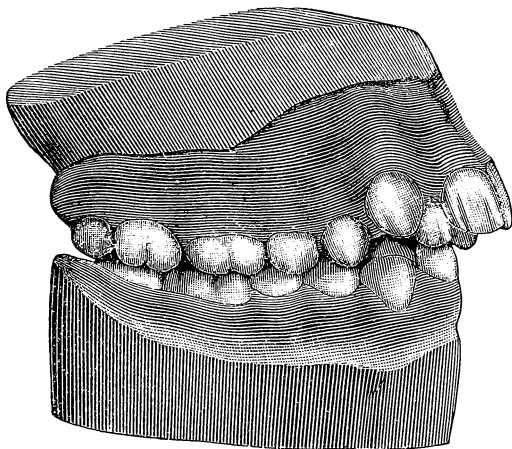


Fig. 2.

narrowed superior denture, it is often thrust forward, but generally pulled backward by the patient, and as this backward pull is irksome, the suffering child seeks to aid it by thrusting the thumb into the mouth and using the upper incisors as a fulcrum, thus assisting the lower jaw to its backward position.

Needless to say this thumb sucking aggravates the deformity. In case the lower incisors bear well against one another, then the arch will not yield and the lower jaw is carried back bodily, but if the thumb sucking takes place at an age when the lower arch is not well braced, then the lower incisors are forced so far backward that they fall well behind the cuspids, and it is easy to decide whether it is the right thumb or the left thumb which has been sucked by noting on which side the displace-

ment of the incisors is greater. In the models which I now pass around, it is the right thumb which has been sucked (Figs. 1 and 2).

In reducing the deformity our first care is to see that the cause is removed. The child must be relieved of all mental strain, and its general system carefully restored by bathing, massage, exercise, etc., while one of the distorted dental arches must be restored by mechanico-chirurgical means. The lower one is preferably the first to be corrected.

I will not take up your time with a consideration of mechanism, as I wish to call attention to the philosophic bearings of this question rather than the mechanical, and most of the members of this society are doubtless familiar with all the mechanical contrivances in vogue for the reduction of these deformities. What I wish is to lay particular stress upon this point that, in restoring the face and jaws to beauty and usefulness, we are carefully to consider the kind of arch to be obtained in conformity with the temperament of the patient, and not to think that any one curve or shape of arch is ideal to all cases.

**Lymphatic
Temperament.**

In the matter of the lymphatic temperament, there is not much to be said. Where it predominates the patient is not often afflicted with dental irregularities, but I have noticed a peculiar condition in the lymphatico-nervous patient. The signs of this temperament as given by Prof. J. Foster Flagg are: "Average size. Less than average osseous and muscular, but more than average contour development. Complexion, dark or light, but generally devoid of freshness or coloring. Cheeks, inclined to be full, prominent, rounded. Forehead, broad and high; jaws, average; chin, small, well formed. Hair, medium in color, but straight or at most slightly wavy, beard sometimes almost wanting. Eyebrows, not marked nor arched. Mouth, average or small; lips, fairly full. Nose, average, somewhat decided in contour. Color and structure of teeth, grayish blue, soft and frequently quite sensitive. Size and form of teeth, average or less than average size, shapely with rounded arch." The peculiarity of the deformity that I have noticed in this temperament is that the teeth instead of being overcrowded are often widely separated, which to my mind constitutes a deformity quite as pronounced as where the teeth are crowded and overlapped. As nothing has ever been proposed to reduce this species of deformity, we will not discuss it here, but pass on to a consideration of the nervous temperament.

**Nervous
Temperament.**

The indications of this temperament are as follows in their relation to the teeth: General color and quality of color, pearl blue or gray inclined to transparency. General form, length predominating over breadth, firm, long cutting edges and cusps. Surface of the teeth,

brilliant and transparent, depressions and elevations abounding in long curves. Occlusion, very long and penetrating. Gum margin or festoon, delicate, shapely and fine, oval in curve. Facial contour, delicately oval. Dental arches, rather narrow.

Now if we attempt to restore the dental arch of a patient where the nervous temperament predominates without taking into account the various indications which harmonize with that temperament, as just stated, it is easy to understand that we may produce a result quite at variance with what should be the proper expression to the face of the patient.

With the patient of bilious temperament, we have the indications quite different from those where the nervous temperament predominates. Here we have all the lines strong, firm and rugged, just in proportion as the bilious predominates. In general form the patient is tall, angular and squarely built. The muscles knotty, prominent, hard and tense. The chest, capacious and of good expansive power. The forehead and cranium square. The facial contour angular, with cheek bones high. In the dental arch, the cuspids are large and prominent, and the arch itself is broad and deep, though deficient in anterior curve. An attempt to make such an arch with a delicate oval curve, as in the nervous temperament, would weaken the expression of the face and be entirely out of keeping with every other feature.

So again with those patients of sanguineous temperament, we have points of contrast from both the nervous and bilious types. Here we have a patient whose general framework is of firmly rounded contour, medium height and robust. The forehead and cranium rounding and full. The facial contour decidedly round, of which roundness the dental arches fully partake at their anterior portion.

Makers of regulating apparatus may provide us with arch bars more or less resembling the human dental arch, but they cannot make any one shape, guaranteed to fit the temperament of every patient. It remains with us as artists to see that we study well the temperament of our patients before beginning the operation so that when the movement of the teeth has so far progressed that the case is ready for the arch bar and finishing touches, we may recognize the kind of curve that should be given to the dental arches in order that they may harmonize with the facial contour belonging to the patient by right of temperament, or else we may find, as I have before intimated, that we have not really restored a lost expression, but merely substituted one class of deformity for another.



Twenty-Second Annual Banquet of the Central Dental Association of Northern New Jersey.

The twenty-second annual banquet and meeting of the Central Dental Association of Northern New Jersey was held at Davis's Parlors, Newark, N. J., on the evening of Saturday, February 15, 1902.

After the banquet was concluded President Gregory called the meeting to order and stated that a silver loving cup (which he exhibited) had been presented to the Association by the Borine Company; on one side of the cup was inscribed:

"C. D. A., Compliments of 'Borine,'"

and on the other side a hornet and the words:

"It will do you no harm;
It will do you no harm;
Says the ragman to the bagman,
It will do you no harm."

The remarks of the president were received with cheers and the members joined heartily in singing the refrain inscribed upon the cup.

The loving cup was then filled with champagne and passed around so that every member of the C. D. A. present might drink to the health of "Borine."

A standing vote of thanks to the Borine Company for its beautiful gift was unanimously adopted.

President Gregory then presented his annual address, as follows:

President's Address.

Tonight we are assembled to fittingly celebrate the twenty-second anniversary of the Central Dental Association of Northern New Jersey.

Having attained our majority, one year ago, we meet at this time to recount the successes of our first year of adult life.

Fostered during infancy and supported during our development into

manhood, we are still fortunate in having some of the founders of our sturdy C. D. A. to direct and encourage us in the accomplishment of what we see represented at these tables, and we are proud to come under the influence of the men who, in February, 1880, wisely organized this society.

We have held our monthly meetings during the past year without interruption or hinderance; we have rubbed elbows at the festive board; renewed and strengthened friendships. We have looked into the faces of our fellow-practitioners with honest purposes in our hearts, and have extended the hand in cordial greeting—that we may know and be known as “friends.”

As a vigorous society we claim the largest and most widely extended circle of friends—not limiting ourselves to a state or a continent; inviting as we do men in all parts of America, England, France, Germany, Finland, Australia, the Philippines and Japan to hear, read and discuss papers on scientific and practical subjects which are conducive to a progressive profession and which may materially aid us in the accomplishment of a worthy desire to keep step in the onward march of dentistry.

We have maintained our reputation for liberality—a distinctive attribute of the C. D. A. A liberality extended toward allied professions, in the presentation of papers, original ideas and methods, and have been addressed during recent years by such men as Doctors R. H. M. Dawborn, recently awarded a \$1,000 prize for original surgical research; R. R. Andrews, of Cambridge, Mass.; Samuel A. Hopkins, of Boston, Mass.; Xavier Sudduth, Norman I. Broomell, A. C. Hart, George H. Guy, editor of the *Electrical Review*; J. Y. Crawford, B. Holly Smith, M. W. Foster, M. L. Rhein, W. W. Walker, Dwight L. Hubbard, Edmund Kells, Louis Ottofy, R. Ottolengui, J. Foster Flagg, C. N. Peirce, Joseph Head, Wendall C. Philips, Frank Abbott, Louis Jack, Charles E. Francis, R. S. Watkins, of New York, showing for the first time before any scientific body of men kinetoscope pictures of living, moving micro-organisms of the physical structures; G. Lenox Curtis, and a host of talented men, recognized for their ability and learning.

A few months ago we passed a resolution inaugurating a movement to found a home where original research, examination of the saliva, bacteriology, the etiology of the teeth and other studies, aided by the microscope and other scientific apparatus could be pursued, and where we might work together for the advancement of our noble profession.

This will come about in due course of time, by persistent and well directed effort. The man at the helm is not one easily dismayed, but a keen-eyed, far-seeing man, who unselfishly is working for the good of our society, as a society, and when Dr. Meeker makes up his mind to achieve an end, it is worth our while to fall in line.

Our sympathies have gone to Paterson, where our fellow-member, Dr. Inglis, departed this life, and more recently in the losses sustained by Drs. Luckey, Pruden, Dunning and Christie, who with others suffered from a terrible conflagration, but who have risen in their strength and asserted their ability to overcome even so great a catastrophe.

The committees and the individuals have given their best thought and endeavor to make possible the accomplishments of the year drawing to a close, and with deep gratitude I acknowledge the support and assistance which your presiding officer has generously received and wish publicly to express my indebtedness.

The prospects for the coming year are bright, and by pursuing its established policy, the C. D. A. will continue to have a pre-eminent position in the dental world, and all her members remain an honor to themselves and their respective communities.

R. Wayne Parker, Esq., member of Congress from Essex County, was then introduced and responded to the toast,

"The Professional Man in Politics."

"The Professional Man in Politics" might rather be said at this time to be the politician among professional men! You have been kind enough to tell me, "It will do you no harm" (laughter), but I confess that to come forward among so many of the profession for the first time, with the remembrance of the time, many years ago, when I was told by one of you that it would do me no harm, is not too assuring!

But I will try to imitate the president who has given one of the shortest presidential addresses I ever had the pleasure of hearing. (Laughter and applause.)

I do not know whether to stick to my theme, but I wonder what is the meaning of presenting this lady (referring to the illustration upon menu card) and then telling me, "It will do you no harm." (Renewed laughter.) Is she the spirit of the toothache? If so, then here's to the spirit of the toothache, I give her my hearty toast. (Applause.)

But I will come to my text, "The Professional Man in Politics." I have an idea of what a professional man is. He is a man who by training, habit and employment is doing something, not for himself only, but for the public. He may be one who fights for his country; he may be one who takes care of the souls of his fellow-men, or he may be a member of the medical profession—of which I consider dentistry an important branch—who takes care of their bodies; or a lawyer, one who takes care of and advises on the relations of men with reference to property and persons. But whatever he may be, he is some one who is trusted by his fellow-

men, to do something for them; one whose advice, aid and actions are sought.

I may almost speak of dentistry as a new profession; I can certainly speak of it as the American profession. (A voice, "That's right," and loud applause.) It is here only that, until recent days, if at all, the requirements of the profession have been fulfilled and there has been a thorough training, extending through a long course of years, in all branches of the work that is to be perfected, and, with it, the brotherhood that always comes between men who study together in their preparation and who work together in their life for a great public good. I can truly say that in America they have built up, almost to the astonishment of the world, a new profession, a branch of medicine, and one that requires, as I understand it, the same long course of study, the same certificate of skill, and the same brotherhood and feeling and love for one another which prevails in other branches of the great profession, which has the care of its fellow-men for its field of action.

**College Men
in Politics.**

So I come to the second branch of my subject, "The Professional Man in Politics"—how he can be in politics, and perhaps why he should be in politics. That he is in politics is beyond all question. If you examine the records of Congress you will find that by far the greater number are men from colleges, and the great rolls containing the names of those who participated in the Spanish war show that the colleges furnished the vast majority of them; men who were accustomed to responsibility and decision, accustomed to command; who had trained their manhood, whether it be will or judgment; who had learned how to know men and to act upon them. It is such men as these who have power in politics. And when we consider the civil professions we will find that every professional man is trained in certain things that are useful in politics. It is his business to make himself pleasant to men in the right way, so as to gain their confidence; it is his business to take responsibility, whether it be with reference to the teeth, to a surgical operation, to the treatment of disease, to the management of a lawsuit or advice in the various matters that occur in business life, or whether it has to do with those more delicate matters that come to a clergyman. Such men as these and men who, as I said before, have that brotherhood which comes always among men who have studied together in the formative days of life, so that they hang together almost as though they were Free Masons or Odd Fellows, have a power in politics. Of the three hundred and seventy nine members of Congress two hundred are college graduates and a very large number belong to different professions. The colleges are scattered—I do not think there are over ten or a dozen that come from any one college; but the influence on

one's life which arises from having lived for two or three years with nothing in particular to do, and with one's mind not bent on "Grub Street," among young men of the same age and with the same surroundings, gives a man a power in politics. (Applause.)

Why he should get into politics is another question. I do not believe there is a single member of your profession who could enter into politics, so far as to take a public office, without destroying his professional status. (A voice, "That's right.") I can say for myself that, while in old days, lawyers found it possible to be members of Congress and to go back home and do their work, or to do it in the Supreme Court of the United States, that is almost impossible today. I feel, not as if I had left my profession behind me, but as though I had taken it with me into a new work; and it is a sacrifice to any professional man to give up his ordinary work and to go into something which is new. I will not speak of the money end of it; that, of course, is something for all of us to consider. But, on the other hand, he does find that there is a profession in politics. I have learned not to look, as people sometimes do, with distrust and contempt, upon a man who makes politics his profession, in a right way. The professional politician has a name, but it is fair to say that no man can really be a servant of the state without being somewhat of a politician. I do not mean that he should ever support anything that he does not believe in, or that he should ever oppose anything that is right; I do mean that there are times and seasons for all things.

Some of you may have heard the address of Mr. **Lincoln.** Crowe, some years ago, in which he took the topic of "Abraham Lincoln as the Politician," and in which he brought forward the fact that during all the years that Abraham Lincoln was opposing slavery he never fought it, and never said it was wrong; he turned simply to the Democratic doctrine that the Constitution did not prohibit slavery in the territories and said that the Constitution did not *order* slavery in the territories; and when he was elected President he refused, while navy yards were falling, post offices being seized and custom houses having their inmates turned out, and the arms of the United States were being taken from the arsenals, he refused to do anything. Why? Because he was too much of a politician to act until a gun was fired at the forts. He waited until war was declared and then, throughout the war, with marvelous insight into human nature, he held the border states true to the Union. His action, from beginning to end, was that of a statesman, but it was that of a man who considered what was possible at the time as well as what was right at the time; but never feared to act when he had the people behind him, and never tried to act until he felt he did have the people behind him. (Applause.)

McKinley.

We have had another example of that, the third martyr, the President who has just left us; he, too, would not go into the Spanish war until it was proved to be necessary for the protection of the American sailor. But when he went into it, he was the Captain General of the war (applause), who sent one commander to Manila and another to Santiago, and refused to wait, when the general of his army told him to wait; who landed troops in spite of the yellow-fever and refused to accept a surrender which allowed the Spanish troops to march out of Santiago, in spite of the advice of every military authority; who captained that war, who was a captain because he understood what the people demanded and what they would support him in. "The Professional Politician," you will say! No, "The Professional Man in Politics," for I adopt as my definition of the professional man, the man who does not look only for the returns of his profession, but thinks of what good he may do for the people all about him; who broadens his sympathies and broadens his control of men, until they learn to believe in him as a friend. (Applause.)

In this profession and in this society there are many of whom I know that to be true, who, though they cannot give up their particular work to become servants of the people, are just as much servants of the people because their eyes and sympathies and hearts are all about them seeing whom they can help, what they can do for their fellow-men, whether in or out of politics. In such societies as these I see the strength of modern American civilization, not bound by rules; not forced into line, but growing with a growth not only of mind, not only of skill, not only of science, not only of training, but of the heart, which, after all, in every profession makes the man. (Loud applause.)

The president then introduced R. Ottolengui, M.D.S., who responded to the toast,

The Dental Press.

I think I am never so happy as when I am with the Jersey boys, and, in spite of the unfortunate reputation for talking which I have, I think I am never so unhappy as when my name is down for a speech.

But I find my name down to respond to the toast of "The Dental Press," and it has been a question in my mind as to just what the word "press" means. It might mean journalism, and it might mean the crowded condition of the dental profession.

In this connection I am reminded of a young man who had just graduated from the grammar school; one of his elders who was interested in his future asked him when he was going to college. "Oh," he said, "I am not going to college, I don't need any further education; I am going to be a dentist." (Laughter.) His friend said: "But I understand that the

ranks of the dental profession are very crowded." "Well," he said, "that may be; but I am going to be a dentist anyway, and the fellows who are in already must take their chances." (Renewed laughter.)

If you will stop to think for a moment you will see that is one kind of "dental press," and then there is the other kind, dental journalism. I take it that the dental journal is primarily for those poor fellows who are already in and who "must take their chances!" They must constantly meet the argument that the young man is coming into the profession with all the latest appliances, and all the latest methods at his finger-tips, and that he knows more in five minutes than a practitioner has been able to learn in five years. Consequently, if a man gets into business and has no further opportunity of receiving his education regularly, it seems to me that his only chance of being further educated is first through his associates in his local dental society, and, second, by association with the members of his profession in all parts of the country, through the records of the dental press, or the dental journal. That has been the purpose of all dental journals from all time.

There is a curious fact which bears out my argument that the dental journal is a part of the educational system in that most of our editors are actually engaged in teaching. Our leading journal, the *Dental Cosmos*, has as its editor the dean of one of our finest university schools. The editor of the *International Dental Journal* is Dr. Truman, another professor in the same school; for many years the editor of the *Dental Review*, was Dr. Harlan, a teacher in the Chicago schools; the present editor is Dr. C. N. Johnson, another professor. The *Western Dental Journal* is edited by Dr. Patterson, a teacher in a dental school; in fact, I think the only journal of any consequence whose editor is not a professor is ITEMS OF INTEREST, and that is probably due to a lack of appreciation on the part of the colleges. (Laughter and applause.) I have no doubt whatever that the editor of that journal, properly approached and with a sufficiently munificent salary offered, would accept a position as a teacher (renewed laughter), and it is more than probable that if he could teach the students one-half of what he thinks he knows they would be the finest graduates that ever held a sheepskin. (Laughter.) However, there is but one person who actually and thoroughly believes in him, and that is the editor of ITEMS OF INTEREST (laughter), and the principal thing that gentleman has learned has been to discover how little he does know (renewed laughter), and that, I take it, is the sum of all knowledge!

When ITEMS OF INTEREST (which is the only journal for which I can officially speak) took on its new cover and its new methods, it branched

out a little from the old system of simply recording facts and endeavored to some extent to initiate things, and in this connection I must say that I am extremely pleased tonight to find myself face to face, so to speak, with a real live Congressman (laughter), because I have been told that whatever promises are made around a dinner table "go."

You all know that *ITEMS OF INTEREST* inaugurated a movement some three years ago and introduced a bill into Congress. It is there yet. (Laughter.) A history of it may interest our Congressman. Perhaps there are a few things about it which he doesn't know. They have a great many cemeteries for dead bodies in cities, and they have a great many morgues in Congress for dead bills called committees. (Laughter.)

Congressman Parker. Why didn't you let me speak after you!

The gentleman interrupted me a little too soon.

Dr. Ottolengui. I desire that he should speak after me. I was told today in a letter from a gentleman in Washington that almost any person, however small, could get a bill introduced in Congress—that, I suppose, accounts for my success in that direction. (Laughter.) I was also told that it takes an enormous amount of influence to get a bill reported from a committee, and I guess that is true. (Laughter.)

The bill was first introduced by Senator Platt and he took so little interest in it that he introduced it "by request" (laughter), which I suppose was a practical hint to the other Senators that he did not care anything about it. We met the Spanish war then and could not do very much with the bill. The second time it reached Congress Senator Platt introduced it without that funny little rider. At that time I succeeded in getting a hearing before the Patent Committee of the Senate, and I must say I was very much surprised to find that there were really a very great number of intelligent men on that committee. (Laughter.) I had been led to think that political office was taken by just any kind of a man because no other kind of a man would take it (laughter), but I find I was mistaken. On that committee there were eight or ten men from different parts of the Union, and it was really a representative committee. The chairman of it at that time was Senator Platt, of Connecticut. I found Senator Platt very keen in two directions. In the first place, he was very warmly in favor of upholding the patent system, and, in the second place, he was very willing to be convinced that the bill which we had introduced did not militate against the patent system and that it was a righteous bill, and he must have had a great deal of dental experience to ask the very intelligent questions which he did. In the end I was apprised by that committee that they would favorably report the bill, but that it should first be introduced in and passed by the House. I wrote to Senator Platt and told him that the only man

I could get to introduce the bill in Congress was a Democrat, but that, so far as I could discover, he was a good Democrat. (Laughter.) I told him the gentleman's name and he wrote to me that he was a good Democrat—about the best Democrat on the New York side of the House. So I had him introduce the bill in the House and in about—I was going to say three minutes, but I don't think it takes as long as that, it got into a committee. It is wonderful how little time it takes for a bill to get in the hands of a committee in proportion to the time it stays there. (Laughter.) In this instance it remained there to the end of the session.

The bill has been introduced this year in the Senate by Senator Platt and I have over Senator Platt's signature a promise that he will do all in his power to have the bill passed in the Senate. It has also been introduced in the House. I have been working through a friend in Washington who is a good hustler, Dr. Bryant—I think I ought to mention his name, because I promised to give him credit for all he did. I will say no more except that we have hope.

Now, it is not much of a speech that I have made, but I have to take advantage of an opportunity tonight and this will be an illustration of what I mean by real live dental journalism. As I said before, we have a Congressman here and it is going to be embarrassing for him to say that he will not do what I am going to ask, for I am going to ask him when he goes back to Washington to put aside all the other affairs of state in order to get this bill passed. (Laughter.) Moreover, I will tell him we have no money to offer him, and would not offer it to him if we had, because we know he would not take it, but he has admitted he is a professional man in politics and I would not give *that* (snapping the fingers) for a professional man who is not ambitious; consequently, it is just possible that at some future time he may appreciate the votes of all the dentists in the United States, for some high office that he may be called upon to fill (applause), and I will promise him another thing—he said he wanted to speak after me—if he will promise us to support that bill every dentist in the United States will work for him for any office he is ever nominated for. (Applause and laughter.)

At the conclusion of Dr. Ottolengui's remarks there were loud cries of "Parker" and "Speech."

I don't know what the bill is (A voice, "It will **Congressman Parker.** do you no harm"); I am not on the Committee on Patents, and I do not know anything about it; but from all I can hear the gentleman's difficulty seems to be altogether with the Democratic Congressmen! (Laughter and applause.)

President Gregory then introduced William James Evans, Esq., who responded to the toast,

"The Good Side of Adversity."

I find it rather difficult to speak of adversity in the presence of so many good fellows who are so full of the milk of human kindness.

With your permission I would like to mention a story of a Mr. Winterbottom, who had the reputation of being a cold sort of man. (Laughter.) He was afflicted with pneumonia, which affected both lungs; he was waiting for the crisis, while in the sitting room the doctors were having a consultation, and he heard one of them say to another: "Well, you might as well; he only has one chance in a hundred to live." And Mr. Winterbottom began thinking and he had an idea that he really was not so very fond of life that he could not part with all the strenuous effort that life calls for and it would not take very much to make him decide that he would like to join the majority and go into that unknown form of rest known as death. Then he began to think of his family and said to himself, "I cannot leave them; I have not the means to leave them comfortable and no one that I know of who has \$10,000 a year would spare enough of it to keep them away from adversity," and he made up his mind that if it were possible he would take that one chance and live. He did live and he prospered, and his family ever afterwards felt that they were on the good side of adversity. So we can see that adversity may suspend a man's fondness for life; but one added interest, like the sting of a hornet, recalls that fondness as quickly as a blast from prosperity.

Regardless of what Shakespeare has said about likeness to a toad, adversity, like a hornet, sends its sharpest sting to impatience. I am glad I am here among men who have had the patience to study so that they might contend with adversity.

A man might very easily qualify for an Irishman by humorously saying that if it were not for his adversity all the doctors might be in the poorhouse. Every one of them probably gets a large proportion of his income through the adversity of others. But there is a good side to adversity which has furnished practically the whole system of education.

You take people who lived in the tropics where the only food necessary was that which they found without cultivation, where the passions but little influenced the people and the garments required to protect them were very meager; they really never had to contend with adversity in any form. But the people were not satisfied to live in that quarter; they wished to try their mettle where there was a little something to do, and now we hardly take any interest at all in ordinary matters; it takes some great event to stir us, like the explorations of Nansen or similar matters.

I do not want to say anything more except this: That I hope that those men who have chosen to be called hornets, all of whom are known to be good fellows, may always be on the good side of adversity. (Applause.)

President Gregory then introduced Charles S. Stockton, D.D.S., who responded to the toast,

For the Honor of the Profession.

A little friend of mine of twelve years of age gave a dinner party to a dozen of her friends of the same age. She arranged everything herself, selected the menu and placed her guests and she presided as the hostess; but there was one thing she was not quite sure about, and so, just before her guests were seated, she whispered in her mother's ear and said, "Shall I ask a blessing?" Her mother replied, "As this is such an informal dinner, I think you can omit the blessing." So when her little friends were all seated, wishing to make an explanation for the omission of the asking of the blessing she said: "Mamma says as this is such an infernal dinner we can omit the blessing."

So I feel that while this may not be an infernal dinner, yet the blessing of my speech could well be omitted.

My subject was given me by your worthy toastmaster. You remember Cassius remarked to Brutus, "Honor is the subject of my story." After the tragedy of St. Helena the remnant of the Old Guard, who threw away their lives to save that of the Emperor, instituted a Legion of Honor and whoever transgressed against its ideal of a gentleman and a soldier was summarily courtmartialed and drummed out.

Now, there is no reason why the ideal of a dental association should not be quite as exalted as that of a military legion.

No men have done more since the establishment of dental societies to preserve and maintain the honor of the profession than Drs. Thackston, Eleazer Parmlee, Arthur, Atkinson, Barker, Buckingham, Abbott, Dwinnelle, Webb, Dunning, McKellops, Cushing, Morgan, Wescott and hosts of others.

They labored without ceasing that dentistry might be exalted into a profession. They were the Old Guard of dentistry. Like all true men, they gravitated toward association, and dental societies have made the profession.

The purity and unselfishness of such men in office cannot be overestimated.

"A king can make a belted knight,
A marquis, duke, and a' that;
An honest man's above his might,
He's king of men for a' that."

Every man should feel it his duty to accept office according to his ability to execute any given work; not from vanity or ambition, but ability to do. What a man knows and can do, that he is.

There are many false notions in regard to honor. A man may be an

infamous scoundrel. Tell him so and he is ready to fight you. An honest man may be accused and he replies: That is a mistake.

Pope says:

- "Honor and fame from no condition rise;
Act well your *part*, there all the honor lies."

No office can confer honor on the man, but the man must confer honor on the office. A true man in accepting office not only elevates the *position*, in the estimation of all right-thinking men, but he elevates the profession and strengthens his own character.

Money can purchase notoriety, but not fame. The public may for a time appear blind, but sooner or later it will manifest its ability to discriminate between the true and the false, and then woe to the deceiver. Ill-gotten gain or fame is like fairy money, it turns into withered leaves.

Let the conscientious man never forget that the public is fully competent to judge between the true professional man and the charlatan—between the competent operator and the dental parlor fake, who fills with gold for "fifty cents up"—up where?

A man goes to a dental college, spends three or four years in association with gentlemen, receiving the best thought and teaching of the faculty, is certified by our Examining Board, after careful inquiry and examination as one qualified to come in among us and be one of us, and then, after a too short trial, he thinks he is handicapped by our rules, because he is prevented from advertising and thereby letting the world know how valuable his services are, and he thus drifts into parlor business and straightway forgets all we have done for him, and he thus lowers the profession to a trade, which he should have entered before even attempting to become a professional man. He thinks it a hardship that he cannot advertise, forgetting that the man who advertises his coats, his shoes, his butter or his eggs simply advertises these articles, while the dentist who advertises claims that he himself is better than his neighbors. He brags about himself, while the merchant brags about his wares.

In union there is strength and every reputable dentist should belong to some society.

It is almost true that in politics almost any crime is condoned except that of apostacy. But it should be the aim of this society, of every society, to cultivate an *esprit de corps* as sensitive as that of the Old Guard, and in the case of a delinquent he should be made to understand that even beneath the velvet glove lurks the iron hand.

The time will come when the intelligent patient will ask, when inquiring in regard to a man's recommendations, whether he is a member of a reputable society; whether he is in a position where his fellows are able to judge him, both socially and scientifically.

How vastly different is a dental society to a "trust." Here, instead of combining to rob the public, we use every means to protect it. Instead of being monopolists, we would make the noblest thing in the world as free and ubiquitous as the air—integrity! This is a jewel that is untaxed.

By being in a society, by accepting its places of honor and trust, you safeguard every action. Come into our societies. Isolation has ever been regarded with suspicion, from the tub of Diogenes until now. The only way to insure an honorable life is to have honorable companions. Shakespeare says:

"There's naught so good but turned from its fair use
Revolts to vice, and stumbles in abuse."

A generous man runs the risk of becoming a spendthrift; too ardent a zeal for wealth often converts a prudent man into a miser.

There is one thing which is absolutely impossible to overestimate and that is honor. Our motto should be the old French axiom: *Sans peur et sans reproche*. Without fear and without stain.

As I look around these avenues of tables and see your happy, up-turned faces and your sparkling eyes and your nods of approval to what I have already said, I want to add and I say it sincerely, that I am sure that no one within the sound of my voice this evening will ever commit an act or do a deed that will cause the blush of shame to mantle the cheek of any of the Old Guard or cause them to bow their heads in grief. On the contrary, I am sure, that every one, young and old, will strive night and day to win and be worthy of the blue ribbon, the emblem of the Legion of Honor, the proudest insignia ever pinned upon the breast of man.

Roderick M. Sanger, D.D.S., was then introduced by President Gregory and responded as follows to the toast of

The Ladies.

When your toastmaster selected the topic set down opposite my name and placed it on the list between two such profound subjects as the one which the gentleman who just preceded me has treated so eloquently and the one which I doubt not my successor will treat with equal eloquence, I think it was with an idea that I should give you something in a lighter vein. But he who drinks to the toast of "The Ladies" drinks to one of the profoundest, most delightful and most perplexing subjects that has ever troubled the human mind. To speak jestingly of it were almost akin to profanation. Scott has said:

"Oh woman, in our hours of ease,
How fickle, coy and hard to please.
When pain and anguish rend our brow
A ministering angel thou."

The Psalmist has said of man: "Thou hast made him a little lower than the angels and crowned him with glory and honor;" and man has always arrogated to himself in the halls of honor and glory a superior place, but the true artist has always painted the angels in the form of woman.

Shakespeare says: "There is a Divinity that shapes our ends, Rough hew them how we will," and fortunate and thrice fortunate is the man whose guiding divinity is a loving woman.

If at the hand of a wise and loving mother he has inherited those principles and precepts which are to guide him through life, then has he laid the foundation which will place him in the front ranks of men, make him an honor to the position he may occupy in life and perhaps, like Garfield or McKinley, place him as a beacon light on the headlands of history to guide others, as she guided him. So we remember that.

"Lives of great men oft remind us
We should make our lives sublime,
And departing, leave behind us
Footprints on the sands of time."

Or, if he is called from youth's callous days to man's estate by an awakening love for some fair lass, then is he kindled to new ambitions and higher hopes and nobler aims in the endeavor to fit himself to win so grand a prize as her fair hand, and he sings with joyous heart:

"Drink to me only with thine eyes,
And I will pledge with mine,
Leave but a kiss within the cup,
And I'll not ask for wine."

So if, in after life, we rejoice in battles fought and victories won, the joy is increased a thousand-fold by the remembrance of the dear little woman waiting at home to share the victories with us. Or, if adversity be ours, if friends turn away and all the world seem dark and hopeless, then is there still one true, trusting, loving heart to give us new courage to go on, to speak words of hope and to place us once more among the ranks of men.

So let us drink heartily to this toast, "The Ladies." Remember the words of Hiawatha!

"As unto the bow the cord is,
So unto the man is woman.
Though she bends him she obeys him;
Though she draws him, still she follows
As a bow without a quiver,
Useless each without the other."

(Loud applause.)

President Gregory then introduced J. Allen Osmun, M.D.S., who responded to the toast,

"Reminiscences of the National Meeting at Milwaukee."

I am to speak to you on reminiscences of Milwaukee, an exceedingly pleasant topic, and if I were to occupy all the time allotted in recounting the hospitality of the Milwaukee dentists, which was extended to the visitors, I could not do adequate justice to the subject.

I might tell you of their thoughtfulness for our comfort, of the receptions, evening coach rides, the opening of the clubs, the sails on the lake, the musical and many other entertainments which made our visit there one long to be remembered with pleasure, and brought out in a grateful light the hospitality of our western brethren; or I could enlarge on the beauties of the city itself, speaking of its wide and inviting streets, of its handsome and commodious residences, its elegant public buildings, its art galleries and beautiful parks, drives to suburban retreats, its spacious gardens and other places where a certain foamy, refreshing beverage was served *ad libitum* among elegant paintings, music and palms.

But such was not the intention, as I take it, of **National Association of Dental Examiners.** the author of this programme; rather I am expected to give some idea of the meeting of the National Association of Dental Examiners. When I decided to attend this gathering, I did so with a certain feeling of expectancy, for I always had a feeling that it was organized for beneficent work—one that no other organization could do—and when in course of human events the New Jersey Board tendered their resignation as a member of this body, I felt that a great mistake was being made, and I was exceedingly thankful that the resignation was laid on the table for a year, for second and more sober thought. After being in the session of the organization for a few days listening to the delegates giving their experiences and realizing their earnestness to achieve the greatest good for the dental profession all over this country, I was sure that no mistake had been made in withdrawing the resignation, and when again we were in good standing, and I knew beyond any doubt that the mistake had been rectified, I felt I could congratulate you, dentists of New Jersey, that we are again in our rightful position, where we shall stay and use our utmost endeavor to enhance the welfare, advancement and honor of our profession.

The National Association of Dental Examiners stands for higher and broader culture for the individual dentist as well as to hold up the standard of the colleges. That this is needed may I call your attention to the fact that in private conversation with delegates from western, southern, middle, eastern and Atlantic states it was stated that in nearly every board they were called upon to refuse licenses to from ten to thirty per cent of applicants who come before them for examination. Why? Because of im-

perfect preparation. The question naturally arises, Who is to blame? The colleges or the student?

The Colleges. If you ask the college authorities they will say: "We provide sufficient pabulum, but the students do not avail themselves of their opportunities." Is this excuse sufficient? These young men have passed examinations before these same faculties, and they hold certificates which say they are *competent* to practice dentistry; yet, in face of this fact, they do not measure up to the standard set by the examiners of various boards. The scope of these examinations is easily ascertained, if the college authorities wish, and to excuse themselves by stating that the students do not avail themselves of their opportunities will hardly be considered sufficient.

There is not a young man in a thousand who has the slightest conception of the magnitude, the scope or greatness of the requirements that are necessary to make a successful dentist. Why should he? After being in continuous practice for over a quarter of a century (and, I think, I voice the sentiment of every one who has been any length of time in practice), I find myself at times overwhelmed by the strict requirements, the exact methods that must be followed in order to measure up to the ideal, that should and must fill the mind and heart of every man who has the honest desire to do his best for his patient, and his profession.

Who, then, should bridge this gap? is a pertinent query. I answer: "The college authorities." They *do know* or *ought* to know what an exacting profession dentistry is, and, realizing this, they should act accordingly. There are some dental colleges where attendance on lectures is made compulsory. At any rate, until a smaller per cent of failures are recorded, there is an urgent demand for state boards, and if for state boards then there is a great need of a National Association of Dental Examiners to harmonize the examinations, and to bring about that uniformity of interests which is imperatively demanded.

Uniform State Laws. At Milwaukee last year great stress was laid on the need of uniformity of dental laws throughout the country, so that when a student is graduated from college and has passed an examination before any state board, and is a reputable practitioner, if desirous of going from one state to another, he may do so without again having to unearth his textbooks, live over his student days, and again be examined in order to practice his profession. From what I heard at Milwaukee, I think in the near future that interchanges of licenses will be an accomplished fact; at any rate, it should be so, and we of New Jersey stand pledged to do all we can to hasten that event,

There was another abuse which I think was remedied at the meeting of last August, and that is the issuing of temporary licenses. It needs no argument to prove that if a man is competent to practice with a temporary license there is no reason to require him to pass an examination to prove he is capable of practicing with a permanent one. Consequently temporary licenses were discontinued.

Among the many examples of the usefulness of this body may I call your attention to the fact that the **Harmony Between** Examiners Association and the Dental Faculties **Two Associations.** Associations are working together in greater harmony. To explain, a college had transgressed the rules of the Faculties Association to such an extent that this body thought it best for the welfare of their organization that it be dropped from their roll as a reputable college. In order to prevent this, the Faculties Association was served with an injunction restraining them from taking action, which if successful would have given them at least a year longer to carry on their irregular teaching. But the National Association of Dental Examiners came to their aid, and by passing a resolution dropping that college from our list of reputable colleges gave them their death blow, so far as the benefit of that injunction was concerned. Furthermore, it also made a standing rule that no student would be examined from any college not recognized by the Faculties Association as being in good and regular standing with that organization, thus strengthening the moral influence of those colleges which have the best interests of the profession at heart. This was in keeping with the spirit of the decision of the Supreme Court of Wisconsin, which gives the state boards the right to pass upon the question of the reputability of dental colleges.

We have entered upon an era of concessions with both colleges and examining boards, and out of all the discussions will come about such an advancement in dentistry that perhaps we may indulge the hope that men who shall come from these institutions may have such a love for their profession, and such a high ideal of their chosen life work that, remembering the teachings and admonitions of their college professors, "Dental Parlors" will become a thing of the past, because men trained and nurtured in such an atmosphere of noble impulses could not and would not stoop to do an unprofessional act.

You have, perhaps, read the address of Dr. **Bogus Diplomas.** James H. Worman, the United States Consul to Germany, in which he showed conclusively the great extent of the bogus diploma business, which has jeopardized the standard of American dentistry in Germany. But reading the remarks of this gen-

tleman in journals was far different from hearing his speech from his own lips; one realized better what a great amount of work he had done; with what earnestness he felt the great injustice and wrong that our profession was receiving. The evidence of the thorough work, the vast amount of material, and proofs he had collected, the many hours of labor, the great expense from his own personal purse to uphold and defend the honor of American dentistry was a revelation to all who heard him, and moved us to the greatest admiration of his efforts and personal sacrifice. To some extent this infamous traffic in bogus diplomas in Illinois is being suppressed, and the standing of the American dentists in Germany is being restored.

This was exemplified by the change from three to four years' course, and I thoroughly believe that after this is in thorough working order the students who come up for examination will be better prepared in their manipulative ability than heretofore.

There was a thought expressed in an editorial of one of our dental journals which I wish could be placed over the rostrum of every lecture hall in every college in the land. It was to the effect that when a student undertakes the study of dentistry and cannot see his way clear to live while at college and until he can earn his living along professional lines, he has no right to seek entrance into an honorable profession, which he dishonors because of what he calls the "necessity of living."

If he cannot make a living honorably in the profession, then he should enter trade and become an honorable tradesman, and I hope to see enacted by the National Association a resolution (that shall take shape in a law) that before any man can obtain a diploma he must subscribe to an oath similar in all material respects to that which is taken by medical men, to uphold and defend the honor of his profession, and if violated his diploma will become void.

Is this asking too much? I think not.

B. F. Luckey, D.D.S., was then introduced by President Gregory and responded as follows to the toast

The Dental Society—A Judgment Court.

After such a magnificent display of oratory and eloquence as we have enjoyed this evening, it would seem almost futile for one not accustomed to public speaking to attempt to further interest you; but as I am on the programme, I feel that I would be recreant if I did not make at least a feeble effort. It requires some fortitude for an every-day hard-working dental practitioner to essay the role of after-dinner speaker, and in attempting it, I feel that I may not be

entirely unlike a certain man who called upon a physician for treatment. The doctor looked him over carefully, asked him a few questions, felt his pulse and then wrote out a prescription; the patient asked the doctor how much he owed him; the doctor said two dollars. The man, after feeling through all his pockets, exclaimed: "Why, doctor, I must have left my money at home. I changed my trousers this morning and forgot to take out my money. Would you mind trusting me for a day or two?" The man, being a respectable looking individual, the doctor said: "Why, no; that is all right; bring it in at your convenience." The patient started to go out, when turning to the doctor, he said: "By the way, how much will it cost to have this prescription filled at the drug-store?" "Oh, about a dollar," said the doctor. "Would you mind lending me a dollar?" said the man, "and I will pay it all together." The doctor was rather taken aback, but rising equal to the occasion, said, "Yes, here it is," handing him the dollar. As the man reached the door on his way out, the doctor said, "Just a moment, if you please; let me see that prescription again," and taking it he ran his pencil through a line in the middle of it. The man in an anxious tone, inquired, "What is the matter, doctor, did you make a mistake in the medicine?" "Yes," said the doctor, "I did make a slight mistake. I had some medicine in there for your nerves, but I find you don't need any." He got his medicine and his dollar, too, which only goes to prove that a little nerve is a good thing to have once in a while, and without further comment you will find that you are going to get your medicine now, and no dollar with it, either.

"The Dental Society—A Judgment Court" suggests something of the law, but it is not of the law that I purpose to speak to night. It is of the Dental Society as the final bar, where judgment is pronounced upon those who have identified themselves, and made their success or failure in the practice of dentistry. It is the only tribunal from whose judgment there can be no appeal, for it is the crystallization of all that is best, most earnest and progressive in the profession.

It is true that not all good dentists belong to societies. There are a few in every state, who are content to live alone, depriving themselves of the advantages of association with their fellows and natural companions, and depriving the societies of the benefit of their knowledge and abilities. But *they* suffer most, and unless some one hammers them out of their shells, there they hibernate, until God in

His mercy calls them to that everlasting abode where they will have more company, and that not always of the most select.

A man generally gets what he deserves in this world. There are exceptions, but not many, and so sure as the needle points to the pole, so sure is the judgment that is finally passed upon a man by the majority of his peers. Most of us want to be well esteemed. It is proper. A noble ambition and worthy of the best efforts of the best men, and all honest men like to feel that they are worthy of the respect and confidence of their associates. And as your dental society values you (after a sufficient time to analyze and determine your fineness and weight) so will your value go down on the great book of record that no man keeps but every man may read as he runs.

The dental society passes judgment not only on its members, but upon all those in the circle of its activity who are engaged in the practice of dentistry; not formally, it is true. Cases are not taken up and adjudicated directly, but there are threads running through professional life, just as they do through all individual life, that are at some time taken up and woven by the loom of professional judgment into a fabric which stands for a man's position in his profession. No man can be sufficient unto himself. He owes something to his neighbor, and the neighbor we are considering tonight is his professional neighbor.

What we have and enjoy in a professional way is not due entirely to our cultivation and energy; it is largely due to the labors of those devoted men who have trodden the same path before us, and as they went, blazed their way upon the trees and rocks on either side that those who followed might be profited thereby. If they had followed out their professional courses, as some men are doing today and have always done, by performing their daily duties, conscientiously and carefully, perhaps, but neglecting to record by word or pen their experiences or discoveries, avoiding the opportunities afforded by the professional societies within their reach, we today would be no further advanced than were the men who groped their way through the tangle and under the brush of professional ignorance in the days of long ago.

Next to his moral character, a man's professional character and standing is his dearest possession, and when that is weighed in the scales of the court of last resort, he is naturally anxious for a favorable judgment. There are not many Solomons in the world, and perhaps it is a good thing for the world that it is so, for Solomon had a way of settling intricate matters sometimes that today would be apt to cause a great deal of trouble among the litigants.

**A Knickerbocker
Judgment.**

A few years ago I saw a painting by George H. Boughton, a celebrated American painter now living in Europe, depicting a court scene in the early days of Manhattan Island. The scene is described in "Knickerbocker History of New York." It seems that two tradesmen, Wandle Schoonhoven and Barent Bleeker, had fallen out over their respective accounts, each claiming that the other owed him money. So they went to court over the matter. The magistrate was Wouter Van Twiller, and he ordered each one to bring his account book to him. After weighing each book carefully in his hand, and counting the leaves of each, he announced that he found each book to be as thick and heavy as the other and that each contained an equal number of leaves, and that therefore neither owed the other anything, and that Wandle should give Barent a receipt, and Barent should give Wandle a receipt and the constable should pay the costs.

Wouter Van Twiller was simply emulating the example of King Solomon in the conduct of his court. But the court before which your case will be settled is conducted on broader and more equitable lines, and the verdict rendered by it will be accepted by the world as a just one.

As the judgment passed by Wouter Van Twiller was not what we would call just and equitable, so the judgment that may be passed upon you may not be absolutely just, but it will stand just the same. Men are often misjudged.

**A Dying Man's
View of Life.**

I stood, not long ago, at the bedside of a dying man, one who was born of a good family and had all the advantages accorded to a boy of fifty years ago; he was reared with brothers and sisters, who made good records in the world. He was well started in life, but being possessed of a roving disposition, he could not settle down to a steady mode of living and so missed the opportunities and advantages that come to one who selects a career and persistently pursues it. In time he became a tramp and was cast off by his family and friends. That did not seem to annoy or bother him in the least; he continued in his way and drifted further and further away from all that most people hold dear. At last exposure and hardship did its work, and when I saw him he was lying pale and wasted on a bed of suffering. I asked him if he did not think that the life he had led had been the means of bringing him at fifty years of age to such a plight. He answered, "I suppose so, but I have had a glorious life. It has had its hardships, but I didn't mind them. I was born with a roving disposition, and I couldn't resist the impulse

to rove. First, I would work a long while and then rove for a little while; gradually I worked less and roved more, until I finally couldn't bear to work at all and roved all the time; I simply became a tramp. Any place was good enough to sleep at night, anything was good enough to eat, so long as I was free and could go where I pleased. I was content to beg for what I needed to eat and at night when the weather was not too bad to sleep in the woods by the side of a fire built of stray wood or fence rails, and go my way in the morning happy. In the winter the missions or jails were good enough for me. I have had a gay life, and enjoyed it."

That was the story of a dying man. Who has a right to disbelieve it? He had in a measure attained success in life.

Philosophers tell us that a successful life is one that is passed in congenial occupation, that is, contentment and happiness. Money and power rarely bring contentment. But the judgment of the world in this man's case is that his life was a failure, because he failed to achieve something; because he failed to do good to others; because he wasted the talents that he had; but as the panorama of his life passed before his dimming gaze, he died happy. Who among us has a right to say that that man's life was a failure? The world will pronounce it such. Individuals without understanding the man will say the same, but we were not all cast in the same mould, and this man, despite all the sufferings he endured, probably enjoyed a greater aggregate of happiness than many men who go through life striving for a position in church, state and finance.

The judgment of the world in this man's case is probably wrong, simply because he was misunderstood. So I would urge upon you that if you have a case to be properly judged, put yourself in a position to be appreciated and understood; join your societies and mingle with your professional brethren; if you have any talents, use them, not that the Lord may commend you when He calls for an accounting, but that you may assist your struggling neighbor. That you may benefit and inspire those who look up to you, and then when the final roll is called you may with confidence approach the bar and hear the verdict rendered that will place your name among the useful and the honored of your profession.

I cannot more fittingly close than with these words from Thana-topsis:

"So live, that when thy summons comes to join
The innumerable caravan that moves
To the pale realms of shade, where each shall take
His chamber in the silent halls of death,
Thou go not, like the quarry slave at night,

Scourged to his dungeon, but, sustained and soothed
By an unfaltering trust, approach thy grave
Like one who wraps the drapery of his couch
About him, and lies down to pleasant dreams."

H. H. Sutphen, D.D.S., being introduced by President Gregory, responded as follows to the toast:

Professional Requisites of the Modern Dentist.

The progress in the profession of dentistry has been unequalled in any of the learned professions. Its rise has been truly phenomenal. Within the recollection even of members of this society the dentist was considered but little, if any, better than the ordinary mechanic. This no doubt was due in a large measure to the ignorance, narrowness and lack of skill of the members of the profession. But even in those far away days there was one here and there who saw into the future "as through a glass darkly," and foretold the great things which would come to pass.

The growth has been rapid and today sees us fully acknowledged as a profession second to none in importance and usefulness.

It is needless for me, gentlemen, to go into any detail as to our progress, but I may come at once to the subject of my toast, "The requisites of today of the successful dentist."

First in importance I would place a general and broad culture. It is the foundation of every profession. We are called upon to treat all classes in life. To those in lower stations we must appear as possessing a knowledge of affairs in general, to appeal to their well-known respect and admiration for those persons who are better educated than they. At the same time we must not attempt to impress them with our superiority in this direction, but use ordinary tact, that they may respect us for our culture and not be made to feel their inferiority. With those in equal station we must most assuredly be able to prove ourselves as possessing qualifications that will enable us to converse intelligently on the issues of the day and to hold our own on topics of general and local interest.

The day has passed when we can allow our mere skill in our profession to carry us through the many vicissitudes which we are daily called upon to face. In so far as we prove ourselves well educated and abreast of the issues of the time, in direct ratio will be our hold upon the better class of patients we are called upon to treat.

Do not imagine for a moment, however, that we may stop here. This is but the first requisite. We must be thoroughly posted in the

higher branches of our calling, that we may be able to lucidly explain to inquiring minds the causes of the various idiosyncrasies which occur in the oral cavity, not only in connection with irregularities of the teeth, but also as to the origin, cause and progress of caries; the laws of oral hygiene; the causes and treatment of abscesses; the principles of bleaching and the many other subjects too numerous to mention, upon which we are daily questioned. If we have not a ready, concise and clear explanation for all these conditions we are measured accordingly. We cannot pass them over without a good, reasonable and scientific answer.

We should also be able to instruct our patients in the subjects of proper food and diet; the home care of the teeth of infants and children, and the general care of the hygienic condition of the oral cavity.

With all we must possess a positiveness of knowledge that will bear with it the conviction to the minds of our patients that we are able to cope with whatever trouble they may have, in a thorough, masterly and scientific manner.

Not least among the requirements of our calling is sympathy. We should make our patients feel and know that we have some sympathy for them in the pain which we know they have to bear at our hands, and that we know how and do use every means at command to lessen it and make it endurable. This immediately secures their confidence, which is oftentimes more than half the battle.

It is necessary for me to add that a love for our work in its highest sense; a conscientious performance of every operation that comes to our hands; a due regard for the wishes of our patients, in so far as it is right and proper for us to grant them for their best good; a courteous and gentlemanly deportment in the many trying circumstances we are placed under daily; a strict adherence to truth and to the best interests of our patients and not our own financial gain, are all important factors in our success or failure.

I am proud to be a member of the dental profession, proud of the record which it has made for itself, and optimistic in the extreme as to the possibilities which lie before us.

President Gregory then introduced W. L. Fish, D.D.S., who was to have responded to the toast

Our State Society.

In deference to the wishes of the members present, many of whom live out of town, it behooves me to make my remarks very short, regardless of the fact that I had prepared myself—as I will frankly admit—to respond to

Dr. Fish.

this toast in a fitting manner. The hour is so late, however, that it would not be wise for me to detain you in order to do so.

I simply announce the fact that the State Society meeting will be held on the 16th, 17th and 18th of July next, and that the society will have the largest meeting in its history.

It is not only that we have secured more exhibits than we have ever had before and that we will have fully sixty exhibits, but the essay and clinic committees are doing their part and we will have better essays and better clinics than ever before. In fact everything points to a grand success. Be sure to plan your vacation so that you may be with us.

I thank you for the opportunity that has been offered me. It is but once in the lifetime of any one of our members that we are permitted to respond to the toast of the State Society, and I appreciate the honor that you have conferred upon me. (Applause.)

The election of officers then proceeded and resulted as follows:

President, J. W. Fisher, East Orange, N. J.; Vice-President, Wm. H. Pruden, Paterson, N. J.; Treasurer, Chas. A. Meeker, Newark, N. J.; Secretary, Frederick W. Stevens, Newark, N. J. Executive Committee—C. W. Hoblitzell, Jersey City, N. J.; C. F. A. Hane, Jersey City, N. J.; H. P. Marshall, Newark, N. J.; W. Moore Gould, Newark, N. J.; F. Edsall Riley, Newark, N. J.

On motion adjourned *sine die*.

Southern Dental Society of New Jersey.

March Meeting.

Dr. A. Irwin, Chairman of Executive Committee, introduced Dr. Eben M. Flagg as follows: "The Society tonight is favored with the presence of Dr. Eben M. Flagg, of Philadelphia, who will read a paper to us upon the subject of 'Temperament and Orthodontia.' Dr. Flagg is a writer upon this and other dental subjects, who is very well and favorably known, and his presence here is doubly interesting from the fact that he is a cousin of Dr. J. Foster Flagg, one of the most eminent dentists in the United States, to whom we have listened, many of us many times, with intense interest."

Following the reading of the paper the President stated that,

without calling upon individuals, he hoped discussion of the paper would be general, or asking of questions, which the writer of the paper would undoubtedly answer.

Question.

May I ask you what temperaments you find most favorable to the practice of orthodontia?

Dr. Flagg.

The temperament most generally afflicted with oral deformity may be easily understood from the shape of the teeth—the nervous temperament; the necks of the teeth, narrowed very much; you have the bell shape or the fan shape, so when there is some motion, forward or backward, out of the arch, from any pressure from lack of room, the teeth are brought more easily into irregularity and overlap in their effort to accommodate themselves to the narrow arch by crossing, with more facility, in that temperament than in any other. Treatment is pretty much the same in all temperaments, and that treatment is the most successful where nature responds best. I would say that the nervo-bilious is the temperament in which we generally get most assistance from nature in attempting to reduce oral deformity. One can put on more pressure in that temperament and that temperament responds to the treatment better. Of course, to answer a question of that kind thoroughly we should go rather deeply into the changes that take place in correcting a deformity. I am sorry I have not models here to show you how remarkable and how far-reaching these changes are; how we may think we are only operating upon a few anterior teeth, yet the septum may be restored, the nasal passages broadened and even a better mentality added to the patient. I would say by all means that the nervo-bilious and the nervo-sanguine temperament give us the best results. When we come to the lymphatic temperament we have to work much more slowly, and when we come to the sanguine temperament, while our work is well sustained, the nature is more impetuous—not so persistent in aiding us to carry out our treatment. So I would give preference to the nervo-bilious.

The President.

What is the age limit? At what age do you expect to get the best results in regulating the teeth?

Dr. Flagg.

That is also somewhat a matter of temperament. Of course, it is well to begin as early as possible and notice in the very young patient if there is likely to be any deformity, and take all steps accordingly. When the child reaches the age of four a very important change takes place and in the teeth where everything goes on regularly and the blood supply is good there should be separation quite marked in the anterior teeth.

If the separation does not take place at that time and the child does not lose its baby face (as it is called), we may prophesy further deformity and should study the case carefully, inquiring into the habits of the child, its occupations, its nourishment and exercise, in order to correct anything wrong in such matters, and very often we find by pursuing such a course we are not obliged to have much recourse to mechanical interference, and, although in the model which I pass around there was a very bad deformity and the patient twenty years old. I do not now despair of getting important results, for, after four months' treatment of the case the patient begins to breathe through his nose and the arch has widened considerably and the facial contour is changing—the face losing the semi-idiotic expression given by the under jaw. Generally after the age of twenty I would begin to despair of getting good results. Simple regulation of mal-placed teeth, however, not combined with much contraction, may be attempted.

Question. Would you have expected better results if you had taken this patient when fifteen years old?

Dr. Flagg. I should usually expect much better results, for many reasons. The symphysis of the superior maxillary does not become entirely closed until late in life. There still remain two distinct bones for many years, so one may get some advantage from operation beyond twenty years, but it would not be advisable to promise the patient much.

Question. Did you in this case expect movement in the upper as well as the lower jaw?

Dr. Flagg. The upper jaw is fixed, so there can be no independent movement in the upper jaw. The upper jaw itself is not thrust out of position—merely starved out—puny from defective blood supply; the lower jaw, swung upon antagonizing muscles, is thrust into a false place. Even breathing through the mouth is unsatisfactory—it is so difficult to hold the jaw back to give room, that the patient is constantly thrusting something into the mouth to force it back. There are very few cases of oral deformity where the lower jaw is not mal-placed, and correction of the deformity is not possible unless the lower jaw is restored to normal position.

The President. Is thumb sucking the result of some malformation, some giving way of the bones?

Dr. Flagg. Thumb sucking it seems to me results from an anterior deformity. It does not seem to me that thumb sucking does any more than aggravate the deformity.

The President.

You do not think the deformity a result from the thumb sucking?

Dr. Flagg.

I do not. It existed long before. The oral deformity, it seems to me, comes from the contracted condition of the face—the undeveloped condition of the facial bones. In this very case that was passed around I have a photograph of the patient at four, as perfect as you would wish, and a photograph at fourteen, almost like an idiot, yet he is a very intelligent young man. These two photographs give me an idea of about what time it was when the deformity commenced. It must have commenced between the ages of four and fourteen. In this case the deformity has been aggravated by the extraction of a bicuspid. I know the patient had been under mental strain—a bright child whose parents no doubt took pride in stimulating mentally, and in my paper I have shown how that over-mental stimulation may stop the proper development of the bones of the face. Therein I think was the beginning of the deformity.

The President.

Will you explain your method of procedure with a case of that sort?

Dr. Flagg.

The case is one that has a bicuspid extracted from the right hand side. I made (as I claimed before) the ideal position of the lower jaw and the teeth in the lower jaw. Here I considered the last link in the chain of deformities, and I would begin with that first and restore the teeth in the lower jaw to their proper position. I do not trouble myself much at this stage about anything in the upper jaw. I want to get the basis, just as a man in building a house first establishes his foundation. In the meantime I keep my patient well toned and well fed. This bicuspid is passed from under the tongue and brought into the arch so the broadest point shall touch its neighbors at the broadest point, which is the ideal point. Then I carry the four teeth forward and if there is any irregularity, then I put the ideal arch around and carry the teeth around with the arch so as to make the lower jaw perfect again. That being in perfect shape and strong on the antagonistic muscles, the patient can move it properly and get the occlusion with the upper teeth. Then I get the width in the palate. You see the curve on the two upper maxillaries has caused that upper buckling in the center line instead of being bound in the arch. In spreading the arch this buckling in the center will be straightened. I get the arch broad enough to fit the lower teeth in the new position. I do not trouble at this time about the occlusion, as I use an apparatus that always keeps the teeth braced. I do not use apparatus with elastic force. It must

have a positive (screw) movement. Here is the typical case of jumping the bite. There is a key to the situation whenever jumping the bite is necessary; the lower molar is behind instead of in front of the upper molar, which convinces me that it never can be reduced until the jaw is jumped so as to allow the upper molar to strike behind.

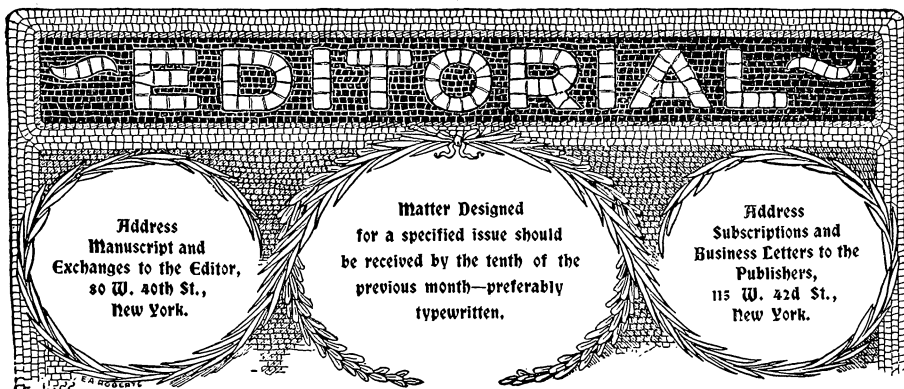
Question.

How do you accomplish the jumping of the bite?

Dr. Flagg.

The patient accomplishes that himself, for when he thrusts the jaw forward (of course, when I get the two separated, the patient, to masticate at all, must throw it forward), when in proper position, the upper arch will be very much broader, so to masticate at all he must push it forward. By placing anything on this upper tooth back here that will make an incline and touch the lower tooth behind the tooth, he can't pull it back. If I put in an extension that will fit the back of the lower molar he cannot thrust his jaw back. If I put it on molars on both sides, he cannot on either side, so he will be compelled to keep the jaw in the true position and he would even be compelled to do it without the inclined plane being there. He is aided in doing it, but he would do it anyway. Let us do all we know and nature will do the rest.





One Thousand Dollars for Dental Research.

In the April, 1897, issue of the *Dental Cosmos* (on page 325) there appeared a letter from Dr. C. Edmund Kells, Jr., suggesting that the editor of that journal should endeavor to raise a fund of twenty-five thousand dollars as an endowment to be used in paying those who might engage in original research in the endeavor to solve some of the vexing problems of dentistry. In the same issue the editor indorsed the proposition, hailing it as an inspiring sign of progress of the professional body towards scientific ambitions. In the course of his editorial he used the following language:

"With a view to practically testing the matter, the *Dental Cosmos* requests an expression of opinion by letter from all who are sufficiently interested in such a plan to signify their approval of it, and to state what amount of cash they are severally willing to donate to a fund to be created for the purpose indicated."

As no further step in this matter has been taken by the *Cosmos*, it is fair to presume, after a lapse of five years, that the letters, if any were received, were not encouraging.

At the annual meeting of the New York State Dental Society, which occurred in the month following the appearance of Dr. Kells's letter and the editorial (May, 1897), a resolution was adopted by that society appropriating five hundred dollars to this fund, provided the whole sum proposed should be raised. And there the matter has rested for five years.

That the every-day practitioner is learning that he profits by the labors of the scientists is evidenced today in many significant facts and occurrences. Noteworthy among these was the resolution adopted by the New Jersey Society, on motion of Dr. Meeker, that a committee be appointed to solicit from Mr. Andrew Carnegie a donation for the endowment of an institution to be devoted to dental investigations.

At the meeting of the New York State Dental Society, just terminated, Dr. Hatch of New York presented a paper in which he pointed out that through the munificence of Mr. Carnegie a scientific institution is to be founded in Washington, and Dr. Hatch suggested that an effort be made to have the trustees of the new institution establish a department for dental research. A resolution to this effect was unanimously passed.

Dr. Wm. Carr of New York then proposed that the dentists themselves might well show an interest in the subject, and asked that the sum of one thousand dollars might be raised by voluntary subscriptions, to be applied to this end. Previous experience having demonstrated that such proposals yield slender harvests if left to propagate untended, it was deemed advisable to solicit the money on the spot. This was done, sums of one hundred, fifty, twenty-five, ten and five dollars being called for one after the other, with the satisfactory result that the one thousand dollars was subscribed within twenty minutes.

Thus far the fund is the private enterprise of the New York Society, but there is little doubt that the committee in whose care it has been placed would be glad to co-operate with other societies who might be willing to contribute. This method of raising money is so simple, and so quickly succeeded at the Albany meeting, that we seriously suggest that the same plan be adopted at every State Society meeting throughout the summer, and that the sums so raised be finally added together as a single fund, controlled by a committee composed of one representative from each society.



Announcement has been made that the date of the National meeting at Niagara Falls has been changed by a vote of the members of the association. The meeting will now convene on July 28 and will continue for four days.

In the same mail with the official announcement in regard to our National Association, we have received the subjoined communication in regard to the meeting of the Maritime Dental Association, at Charlottetown, P. E. I.

Maritime
Dental Association.

This suggests an exceedingly pleasant pleasure trip, which might well be indulged by the dentists of the East,

especially those in the New England section. The meeting of the Nova Scotia dentists occurs on July 9 and 10. Those desiring to attend both meetings might visit Charlottetown at this time, and starting thence go to Quebec, an exceedingly interesting and historical old town. From Quebec a run up the St. Lawrence to Montreal,

stopping there for three or four days, then proceeding up the St. Lawrence through the wonderful rapids and on to Toronto, where the time can be pleasantly spent until it is necessary to cross the lake to Niagara for attendance at the National. Following is a copy of the circular received from the Secretary of the Maritime Dental Association:

"St. Paul Building, Halifax, N. S., March 22, 1902.

Dear Doctor:

It is proposed to hold the convention of the Maritime Dental Association in Charlottetown, P. E. I., on July 9 and 10, at the same time as that of the Maritime Medical Association.

Will you kindly let me know before May 15 whether or not it will be possible for you to assist in our programme, by an address, paper or clinic, preferably the latter?

The prospects for a large and enthusiastic meeting are very bright, and any assistance you may be able to render will be much appreciated.

If you can reply in the affirmative, and I hope you can, kindly let me have the title of subject, and if a clinic, what kind of a patient you will need for operation.

If impossible for you to assist in programme, will you attend the convention?

An immediate reply will oblige,

Yours faithfully,

GEO. K. THOMSON, Secy."

**Education
of the
Public.**

Now that the question of the preliminary education of dentists is reaching a settlement it is not inopportune to consider how much preliminary education a patient should have before applying to a graduate for dental services. The following from Dr. A. R. Church, who informs us that he is the only dentist in Hebron, Indiana, would seem to indicate that there are some who may appreciate the necessity of dental services, but who have not received a very high order of education. One of his patients asks for an appointment in the following language:

"Dear friend I wanted to Wright and ask you When you could fill a tough for me and how mutch it would cost."

**The Digest
and
Copyrighted Articles.**

The editor of the *Digest* apparently has devoted so much of his time fighting patents that he has overlooked the copyright laws entirely. In the March number of the *Digest*, among the "Original Communications," appears an article entitled "Tin—A Plea

for More Conservative Methods in Filling Teeth," by Dr. T. D. Shumway, Plymouth, Mass. This paper was first published in *ITEMS OF INTEREST*, and was copyrighted. The *Digest* has not only republished the matter, but has done the author the injustice of omitting the copyright claim.

**Drying Cavities
with Hot Air.**

Dr. John I. Parker, of Manteno, Ill., describes his method of drying out cavities as follows: "It may be an item of interest for some of my colleagues to know how I have solved a problem that has vexed me for years—that of drying a cavity in a tooth with hot air. I have used chip blowers, so-called hot air syringes, etc., with their intermittent blasts, which often scared my patients and failed to dry the cavity.

Having a nitrous oxide gas tank near my chair into which I pump air with bellows through large tube, I disconnect the small rubber tube from cylinder and connect it with a piece of $\frac{1}{8}$ inch rubber tubing, at the other end of which I attach the metal part of a Moffat's hot air syringe by cutting off the brass tube near finger rests. Place the metal bulb on shield of alcohol lamp, and when heated open the valve near tank, and I have a fine, continuous stream of warm air as long as I want it, or until the metal bulb cools, when it can be again placed over flame to heat while other work is being done. It is very successful in my hands, although I could improve on it with a heater made to order.

As will be seen by the following circular, an effort is to be made in Montreal to form a National Dental Association in Canada.

"The confederation of the professions of the various Provinces of Canada was thought of and seriously considered as long ago as 1867. Now and again it has been revived by those who could see the advantages of such a confederation. The Medical Profession took the first step when they organized the Canadian Medical Association... They expect to have organized before very long the confederation of all the governing bodies of the Medical Profession in Canada. The Pharmacists are working toward the same goal. The Dental Profession is not to be found wanting in such a meritorious movement.

"Every dentist in Canada who can rise above mere local or provincial affairs in our country, and has thought about the immense advantages to be gained by the nationalization of the dental profession, should unhesitatingly give the idea his support. The legal representatives of the profession in the various provinces have agreed to work toward giving dentistry a national character.

"The way seems to be prepared for the first step towards the goal. The Quebec Dental Association together with one representative from

each of the Provinces have undertaken to organize a meeting in Montreal, September 16th, 1902, at the same time as the Canadian Medical Association. A single fare round trip ticket can be purchased at that time.

"It is the intention to prepare and carry out the best clinical and scientific programme that was ever presented in Canada. A number of the leading men in the several Provinces have already consented to be present and take part in the programme. Three of the best known Canadians practicing dentistry in the United States will be on the programme. Every dentist in Canada is expected to be present and take part in the deliberations of the first meeting of an association that will represent the learning, the education and the thought of the Dental Profession of a rising country. The Association will, no doubt, be as progressive, as representative, as influential in the upbuilding of the profession, and as broad and liberal-minded as that of the National Professional Associations of Germany, France, Great Britain or the United States. Surely no dentist having a spark of national Canadian character in him will fail to appreciate what such an association will mean to the Profession and to him. Think about it, talk about it, be present at it, and take part in it.

"While the Association is in session, the legal representatives of the various Provinces will meet together to consider by what means the Dental educational standards of Canada can be harmonized. For further information on this subject, read the *Dominion Dental Journal*, September, 1900, February, 1901, November, 1901. Remember the date and place of meeting:

Montreal, September 16th, 17th and 18th, 1902, and look for further notices and for the programme.

EUDORE DUBEAU, Sec'y.

396 St. Denis St., Montreal, Canada."

Reception to at the home of Dr. Louis Ottofy, Dental Surgeon, in
Dr. Robert Oliver honor of Dr. Robert T. Oliver, Examining and
in the Philippines. Supervising Dental Surgeon, U. S. A. There were
many representative men of the profession in Manila

in attendance, including American, English, Spanish and native. During the evening, Dr. Ottofy made a short speech concerning Dr. Oliver and his official duties in the Philippines, also referring to the doctor's high standing in dental circles in the United States.

In reply, Dr. Oliver gave an outline of what he hoped to accomplish, also discussing several technical points. It is possible that a result of the meeting and the interchange of ideas may be the formation of a Philippine Society of Dental Surgeons.

The following were present: Dr. Robert T. Oliver, Examining and

Supervising Dental Surgeon, U. S. A., and Mrs. Oliver, the guests of the evening, Drs. F. Homer Wolven (U. S. A.) Louis Ottofy, W. G. Skidmore, C. T. Starr, T. H. Stephens, Juan Arevalo, Ramon Arevalo, Francisco Eguia, Juan Villanueva, Leon Reyes, Manuel Farinas and Carmen Formoso y Farinas. Dr. Mitchell sent regrets, being absent by reason of illness. Thus the entire profession (with one exception) did honor to the representative of the dental corps in the United States Army.—*Exchange*.

**Dental law for
Indian Territory.**

The following is a copy of a bill now before Congress intended to regulate the practice of dentistry in the Indian Territory. When adopted, this will be the first dental law passed by the United States Congress.

57th Congress, 1st Session. H. R. 4558. In the House of Representatives, December 10, 1901. Mr. Little introduced the following bill, which was referred to the Committee on Indian Affairs and ordered to be printed.

A bill to regulate the practice of dentistry in the Indian Territory.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That it shall be unlawful for any person to practice or attempt to practice dentistry or dental surgery in the Indian Territory without first having secured a diploma from some reputable dental college, school, or university department duly authorized by the laws of some State in the United States or some foreign country, and in which college, school, or university department there are at the time of issuance of such diploma annually delivered a full course of lectures and instructions in dentistry and dental surgery: *Provided*, That nothing in this section shall apply to any person engaged in the practice of dentistry or dental surgery in the Indian Territory at the time of the passage of this act, except as hereinafter provided: *And provided further*, That physicians and surgeons may, in the regular practice of their profession, extract teeth or make application for the relief of pain.

Sec. 2. That it shall be unlawful for any person or persons to extract teeth or perform any other operation pertaining to dentistry for pay, or for the purpose of advertising, exhibiting, or selling any medicine or instrument, or business of any kind or description whatever, unless such person or persons shall first have complied with the provisions of this act.

Sec. 3. That a board of examiners, consisting of three resident dentists, graduates of reputable dental schools, is hereby created, who shall have authority to issue certificates to persons in the practice of dentistry or dental surgery in the Indian Territory at the time of the passage of this act, and also to decide upon the validity of such diplomas as may be subsequently presented for registration, as hereinafter provided, and issue certificates to all applicants who may hereafter apply to said board and pass a satisfactory examination.

Sec. 4. That the members of said board shall be appointed by the

Chief Justice of said Territory, and shall serve for a term of three years, except that the members of the board first appointed shall be made as follows: One for one year, one for two years, and one for three years, respectively, and until their successors are duly appointed. In case of vacancy occurring in said board, by death, removal from Territory, or resignation, such vacancy shall be filled for its unexpired term by the Chief Justice of said Territory.

Sec. 5. That before entering upon the duties of his office each and every member of this board shall make oath before any officer authorized to administer oaths, who shall be empowered to use a seal of office, that he will faithfully discharge the duties incumbent upon him to the best of his ability. The same shall be filed for record with the clerk in the judicial district in which affiant resides. The clerk shall receive for recording same fifty cents.

Sec. 6. That said board shall keep a record, in which shall be registered the names and residences or places of business of all persons authorized under this act to practice dentistry or dental surgery in said Territory. It shall elect one of its members president, one secretary and one treasurer thereof, and it shall meet at least once in each year, and as much oftener and at such times and places as it may deem necessary. A majority of the members of the said board shall constitute a quorum, and the proceedings thereof shall be open to the public.

Sec. 7. That every resident person engaged in the practice of dentistry or dental surgery within said Territory at the time of the passage of this act shall, within sixty days thereafter, cause his or her name, residence, and place of business to be registered with said board of examiners, upon which said board shall issue to such members a certificate duly signed by a majority of the members of said board, which certificate shall entitle the person to whom it is issued to all the rights and privileges set forth in section one of this act.

Sec. 8. That any person desiring to commence the practice of dentistry or dental surgery within this Territory after the passage of this act shall, before commencing such practice, file for record in a book kept for such cases with the said board of examiners his or her diploma, or duly authenticated copy thereof, the validity of which the said board have the power to determine. If accepted, said board shall issue to the person holding such diploma a certificate, duly signed by all or a majority of the members of said board, which certificate shall entitle the person to whom it is issued to all the rights and privileges set forth in section one of this act.

Sec. 9. That every person to whom said certificate of license is issued by said board of examiners shall, within thirty days after the date hereof, present the same to the clerk of the judicial district in which he or she resides or expects to practice, who shall officially record such license in a book in his office provided for that purpose, and shall be entitled to a fee of fifty cents for his service.

Sec. 10. That to provide for the proper and effective enforcement of this act said board shall be entitled to the following fees, to wit: For each certificate to persons engaged in practice in the Territory at

the time of the passage of this act, the sum of one dollar; for each certificate issued to persons engaged in the practice of dentistry or dental surgery within the Territory at the time of the passage of this act, the sum of five dollars.

Sec. 11. That the members of said examining board shall receive the compensation of four dollars per day for each day actually engaged in the duties of their office, which, together with all the legitimate expenses incurred in the performance of such duties, shall be paid from the fees received by the board under the provision of this act; and no part of the expenses of said board shall at any time be paid out of the appropriations for said Territory. All moneys in excess of said per diem allowance and other expenses shall be held by the treasurer of said board as a special fund for meeting the expenses of the said board, he giving such bond as the board may from time to time direct; and said board shall make an annual report of its proceedings to the Chief Justice by the fifteenth day of December of each year, together with an account of all moneys received and disbursed by them in pursuance of this act.

Sec. 12. That any person who shall violate this act by practicing or attempting to practice dentistry or dental surgery within said Territory without first complying with the provisions of this act shall be deemed guilty of a misdemeanor, and upon conviction thereof shall be fined not less than five dollars nor more three hundred dollars for each and every offense, each day in the practice constituting a separate offense. All fees collected from the prosecution under this law shall be appropriated by the United States Government.

Sec. 13. That any person or persons who shall violate this act by extracting teeth or performing any of the other operations pertaining to dentistry for the purpose of advertising, exhibiting, or selling any medicine, instrument, or business of any description shall be deemed guilty of a misdemeanor, and upon conviction thereof shall be fined a sum not less than twenty-five dollars nor more than three hundred dollars for each and every offense.

Sec. 14. That this act shall become operative as soon as signed by the President of the United States.





Regional Anatomy of the Head and Neck

FOR

Students and Practitioners of Dentistry.

By WILLIAM T. ECKLEY, M.D.

PROFESSOR OF ANATOMY IN DENTAL DEPARTMENT, UNIVERSITY OF ILLINOIS; PROFESSOR OF ANATOMY,
COLLEGE OF PHYSICIANS AND SURGEONS, MEDICAL DEPARTMENT, UNIVERSITY OF ILLINOIS; PRO-
FESSOR OF ANATOMY, CHICAGO SCHOOL OF ANATOMY AND PHYSIOLOGY; PROFESSOR OF ANATOMY,
CHICAGO CLINICAL SCHOOL; FORMERLY PROFESSOR OF ANATOMY IN NORTHWESTERN UNI-
VERSITY DENTAL SCHOOL,

and CORINNE BUFORD ECKLEY, M.D.

Demonstrator of Anatomy in Dental Department, University of Illinois; Demonstrator of Anatomy,
College of Physicians and Surgeons, Medical Department, University of Illinois; Professor
of Anatomy, Chicago School of Anatomy and Physiology; Formerly Professor of An-
atomy in Northwestern University, Woman's Medical College.

With Twenty Plates in Black and Colors and Thirty-six Illustrations in the
Text.

Lea Brothers & Co., Philadelphia and New York.

The authors of this book state that the work is prepared at the request of practitioners and students of dentistry, which would indicate that the dentists of today are building for the future, and it is well that it should be so, for we believe that the dental graduate, with whom we will be thrown in competition twenty years hence, will be an individual who can and will perform the various surgical operations of the head and neck with the same skill and deftness that we of today accomplish dental operations.

It is held by many that preparedness is ever the cause of constant success, and if it be true, then every dentist should possess the book we are now to review.

The predisposition of the trifacial nerve to pain is correctly considered in Chapter I, while the reason that this nerve should be the main reflex storm center in man is stated to be the same as was observed by Landois and Stirling in part. The trifacial nerve represents the sensory roots of all the motor-cranial nerves, from the third to the twelfth,

inclusive; hence it responds reflex by its motor nerves of the face, orbit and tongue. The ascending sensory root of the trifacial nerve comes from the nuclear gray matter in the floor of the fourth ventricle, in a line continuous with the sensory roots of the cervical nerves; hence radiation of pain from neck, upper extremity, diaphragm, pleura, pericardium and peritoneum to the trifacial, and vice versa, are logical sequences. In the differential diagnosis between local and reflex pain the statement is made that "pain in a region, in the absence of local inflammation, is reflex"—a statement that many might question.

The responsibility of the dentist to his patient in regard to the production of pain is nicely portrayed in the following paragraph: "The tacit understanding between patient and dentist, aside from pecuniary and restorative consideration, is a minimum amount of pain on the part of the patient: (1) Extent of sensory area irritated; (2) length of time that the sensory nerves are exposed to irritation. These two elements physiologically figure conspicuously in the production of pain, and the operator has it in his power to produce maximum or minimum pain on his patient in proportion to his observance of physiological precepts. The dentist who carelessly manipulates the lips, who roughly retracts the angles of the mouth, who applies the rubber so as to involve gum tissue by painful compression, and who detains his patient three hours in the chair where one hour should have sufficed, is culpable, because he violates (1) the time element and (2) the painful area element concerned in the production of pain."

When discussing the muscles of mastication, many hints are woven into the dry anatomical subject which are of great value when the question of ligamentous and fibrous ankylosis are to be considered. The roof of the mouth is taken from the pre-natal period and carried through its various changes until the normal adult form is reached, closing the chapter with this advice for those who operate upon the palate: "In operating on clefts in the hard palate avoid: (1) the anterior palatine fossa; (2) the posterior palatine canal; (3) the junction between the alveolar process and the hard palate," which is good advice where it can be followed.

The cutaneous structures of the face and intra-osseous sinuses are dealt with in the clear, comprehensive manner that their importance demands. One of the few errors made in the consideration of these subjects is in giving Fillebrown the credit that belongs to Cryer, as being the first to make known the direct communication between the frontal and maxillary sinuses. This valuable paragraph is taken from the symposium upon surgical regions of the neck: "Inoperable structures.—(1) The sympathetic nerve, (2) the pneumogastric nerve, (3) the phrenic nerve, (4) the superior laryngeal nerve, (5) the dome of the pleura, (6) the

recurrent laryngeal, (7) the hypoglossal, (8) the cervical sympathetic. Operable structures.—(1) The larynx—laryngotomy; (2) the trachea—tracheotomy; (3) the thyroid gland—thyroidectomy; (4) the œsophagus—œsophagotomy; (5) the facial nerve—stretching; (6) lymphatic glands—removal of; (7) arteries—ligation of.”

The authors should be congratulated upon the presentation of a work with so few errors; although it contains many, they are less in number and importance than we find as a rule in first editions.

Believing that the publishers should have the credit which is due them when a volume is presented having twenty plates in black and colors and thirty-six illustrations in the text, it is hereby tendered, and with it the hope expressed that the sale of this excellent work will warrant the expenditure. In closing let us in all fairness and candor, to both publisher and author, state that they have presented the dental profession with a worthy book, but one upon which the sale will be light, for the reason that better and more surgery was not incorporated throughout the various chapters.

W. H. G. L.

Gray's Anatomy, Descriptive and Surgical.

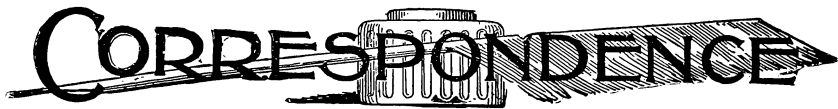
By HENRY GRAY, F.R.S.

Edited by T. PICKERING PICK, F.R.C.S., and ROBERT HOWDEN, M.A., M.B., C.M.
A revised American, from the fifteenth English, edition, with 780 Illustrations. Lea Bros. & Co., Publishers, Philadelphia and New York. Cloth. Price, \$7.00.

We are pleased to find some of Dr. Cryer's excellent illustrations among the many new ones. In the production of this edition a few important alterations have been made in the chapters on general anatomy and embryology, which demonstrates the activity with which research is being carried on in this branch of science. With the exception of a few typographical errors, and the usage of a few terms which are looked upon in this day as obsolete, one can find but little to criticise; but how could it be otherwise, for has not this book printed on its title pages the name of the most distinguished anatomist for the half century just passed? We find many new practical facts in medicine and surgery woven into this new edition, resulting in its value being increased over those that have preceded it. In fact it is the prominent and distinctive features of Gray's anatomy, and we believe, because of these practical ideas printed throughout the various chapters is found the true reason of the success this work has ever had over its competitors.

W. H. G. L.

CORRESPONDENCE



Tin and Gold.

Editor Items of Interest:

I think it would be a matter of general interest to your readers if Dr. Shumway would explain in an early number of the *ITEMS OF INTEREST* how near the surface of the cavity the tin filling comes when fully consolidated before he commences to put on the gold cylinders; whether to the inner edge of the enamel wall or quite to the surface of the cavity, and what means he uses to cause the annealed gold cylinders to adhere to the tin; whether he rubs them on with his ivory points or presses them on to the tin with rough or smooth plugger points, and how many layers of gold cylinders he puts on the surface of the tin. I am,

Yours truly, A USER OF TIN.

Reply by Dr. Shumway.

Editor Items of Interest:

As tin is used for its preservative properties, the cavity is filled as near the surface as possible, that the dentine may benefit by contact with the material. The gold is put on in the cohesive form, simply as a protective covering for the tin. The method is intended to make a tin filling with the objectionable features eliminated.

In approximal fillings, enough is taken from the surface to allow the gold, when put on and finished, to cover and conceal the tin. When it will come to wear, a little more of the tin is removed to give a better wearing surface of gold.

The means used to cause the two metals to unite is the manipulation of the tin within the cavity by consolidation. When the tin is ready for the gold, it should be as solid as a piece of block tin, and free from any loose pieces or scales; the margins to be nicely trimmed with a sharp instrument like an excavator.

The thorough condensation of the tin is of very great impor-

tance. It was my early practice to heat the tin over an alcohol flame on a piece of mica before using it. This was open to objection, as some of the cylinders of tin would get overheated and the filling would not be made uniformly solid. By experiment, I learned a better way—that is, to heat the plugging instrument and anneal the tin within the cavity. The method I now employ is to first put in as many tin cylinders (not too many) as will fill the cavity when consolidated, then heat a small plugger in an alcohol flame and force it into the mass. This operation is repeated until the tin shows a decided change in the relation of its molecules. This will appear in the resistance which the filling makes under the plugger, and shows the union which is taking place in the particles. Now, with a plugger with a larger operating surface heated as before, consolidate the whole. The degree of heat is immaterial provided it is done with care. Tin becomes very malleable at 212 degrees F. and melts at 442 degrees. It is a very low conductor of heat and cold, and the teeth respond very quickly to thermal changes. I do not mean by immaterial, that you can put a red-hot poker in the cavity of a tooth with impunity.

The success of uniting the gold and tin will depend upon the solidity of the filling, manipulated by the application of heat. The tin filling should be made to unite so the surface can be shaved and leave a nice clean cut.

My failures have been largely due to the fact that the base was not uniformly solid. Added to this, a want of proper attention to dryness and cleanliness. Sometimes the gold would scale from the tin, and where it came to wear it would lose its power of cohesion under the "crushing stress." There is one thing, however, which can be said even of these failures. When the tin was removed, there would be no sign of decay, and the cavity would present a healthy appearance with no necessity for additional excavating. I am convinced that a filling of tin, though it be soft and loose, will preserve a tooth better than one of amalgam which has been anchored so that it cannot get out, no matter how much attention has been given to the details of crushing stress, edge strength, etc.

If the directions for consolidating the tin have been followed, and the filling kept dry and clean by the use of the rubber-dam, the surface made bright by cutting it smooth, take a single thickness of cohesive gold foil (No. 2), anneal it, and the gold will unite with the tin by simple contact, under the manipulation of an ivory point. If it does not unite insensibly no amount of forcing will do any good. The process of using No. 2 foil is very slow, but this is a good way to

begin the experiment. In the use of gold cylinders more practice is required; besides, it needs a cylinder made for the purpose. Most of the cylinders are too stiff and arbitrary, as they are made to be used with mallet or hand pressure. The reason I use ivory points is to keep the gold in that peculiarly soft condition it is in when first annealed. Working cohesive gold makes it hard. There is no inter-lacing of cohesive gold with the tin.

This method is based upon the principle that the dentine of a tooth requires a material, when placed in contact with it, which shall not obstruct the process of restoration which is taking place within. Cohesive gold malleted in a tooth is contrary to nature's method of repairing wasted tissue, and when forced into a tin filling, impairs its value as a tooth preserver. It seems to me that those who have made a study of tooth development, cannot fail to recognize the fact, that this method is simply putting into practice the results of scientific investigation and research. It is an underlying principle that the teeth are living organs, and when attacked by disease their treatment demands that any material placed in contact with an exposed surface shall not obstruct nature's process of repair. The internal structure of the filling should be therapeutic, with an outside covering for protection.

Tin, by reason of its peculiar physical characteristics, meets this demand better than any material known at present. It is easy of manipulation, and is adapted to a wider range of operations than all other materials combined. There may be different methods of operating, but only one principle by which all methods are to be tried. Is it in harmony with the laws of growth and development which modern scientific investigation has revealed?

When the jewelry fad, and the porcelain fad have ceased to engross the attention of the profession, may the real mission of dentistry, to wit, the preservation of the natural teeth, again become paramount. At that time we hope this method will receive the consideration its importance seems to demand. There will then, by reason of neglect and other causes, be opportunity enough for the geniuses to show their skill along mechanical lines, in cutting of crowns and filling in gaps.

The way to conceal the tin in the anterior teeth, and the treatment of exposed pulps and pulpless teeth, we would like to discuss did time and space permit. I thank the "User of Tin" for asking these questions, and the editor of *ITEMS OF INTEREST* for the courtesy extended.

Yours very truly,

T. D. SHUMWAY.

Plymouth, Mass., May 12, 1902.

Tin and Gold.**Editor Items of Interest:*

In Dr. T. D. Shumway's paper on "Tin," read before the Vermont State Dental Society, March 21, 1901, and published in the *ITEMS OF INTEREST*, March, 1902, there are several points that might be further explained with advantage.

Does he use a hot instrument throughout the entire operation of packing and wedging in the tin, or only for surface consolidation? He says the tin when consolidated should be flush with the enamel walls. How does he then cover the tin with gold in an occlusal cavity on a molar, for instance, so that the whole of the gold is not removed in grinding down the filling to the bite? If he cuts away the tin to admit of sufficient gold being left to cover up the tin after finishing, to what depth does he cut out the tin? And what thickness of gold does he find sufficient to protect the tin from wearing away in a large occlusal cavity with a strong, hard-wearing bite?

In approximo-occlusal cavities in bicuspid and molars, is the tin left exposed up to the knuckle, or is it completely covered with gold? If completely covered, how is this done without an enormous and impracticable separation of the teeth?

If the gold is confined to the occlusal surfaces in these cases, how thick should it be? And should it be anchored into the dentine, or is its cohesion with the tin alone depended on?

Is Dr. Shumway's method applicable to incisors? Will not the tin give a disagreeable appearance to these teeth if the labial wall is at all thin?

There is a difference of opinion among dentists as to whether tin, when not completely covered up with gold, rots or does not rot at cervical margins. My experience is that it often does rot. I am open to believe that this difference of opinion may depend on the quality of the tin used. I should not be surprised to learn that a good deal of tinfoil supplied to dentists contained lead. I think it would be useful if Dr. Shumway would tell us where he obtains his tinfoil.

As showing the value of entering into minute detail in dealing with this subject, I may mention that although I never had the slightest difficulty in making Leslie's crystalline gold, or solila gold, cohere perfectly with tin, I never could succeed with foil, or any other kind of gold, until I used the hot instrument, and until reading this last article of Dr. Shumway's, I wondered how he was able to do it.

Yours faithfully,

Scarborough, Eng.

WM. CASS GRAYSTON.

*Received too late to submit to Dr. Shumway before publication.—Ed.

Degrees for Undergraduate Practitioners.

Editor Items of Interest:

DEAR SIR: I am very much interested in the letter of Dr. Cheaney as published in the March number of the magazine. I am interested because it describes my condition to a letter. I began the practice of dentistry twenty-five years ago, at a time when it was not thought to be necessary to have a dental college education. I have seen the time since when I wished I had taken the course, but it is too late. I cannot spend the time nor money now to go to the schools and begin at the A B C of the work. My twenty-five years of practice ought, in human justice, to count for something. Owing to a supposed inability to pass the state examinations, I am prohibited from going out of my state to do dental work, which I am at liberty to practice anywhere in this state.

It appears to me very strange and wholly wrong that a man who is proficient enough in his profession to work in one state should not be able to work in any state. This is digressing a little, but still is a subject that is akin to the other—of providing a way whereby a practitioner of years may get his degree without so much lost time. The idea of giving honorary degrees in the same manner as do other schools is worthy of consideration. A quarter of a century of faithful, continuous work in one line ought to be evidence enough that the person is qualified to receive a degree or to work in any chosen field. The man who has thus labored has without doubt received from his own state some recognition of his worthiness. I have held several offices in our State Dental Society, and very likely have furnished something in the way of instruction, papers for publication, and have devoted additional time and money to some particular branch of the work; have added something to the line of valuable assistants used in our work.

All this ought to set a man above the student who has perhaps never seen even a tooth extracted before entering school, or who has not even a common school education.

These are questions worthy of thought and action too from those who are so situated that they may entertain these ideas.

Respectfully yours,

J. A. ROBINSON.

Morrisville, Vt.



National Society Meetings.

National Dental Association, Niagara Falls, N. Y., July 28, 29, 30.

National Association of Dental Examiners, Niagara Falls, N. Y.,

July 25.

National Association of Dental Faculties, Niagara Falls, N. Y.,

July 31.

American Society of Orthodontists, Philadelphia, Pa., Oct. 8, 9, 10.

State Society Meetings.

California State Dental Association, San Francisco, June 10.

Colorado State Dental Association, Colorado Springs, June 17, 18, 19.

Connecticut Odontological Society, Raven Rock, June 24.

Delaware State Dental Society, Wilmington, July 2.

District of Columbia Dental Society, Washington, Dec. 16.

Georgia State Dental Society, Macon, June 10.

Indiana State Dental Association, Lake Maxinkuckee, June 24, 25, 26.

Maine Dental Society, Camden, July 15, 16, 17.

Massachusetts State Dental Society, Boston, June 4, 5.

Michigan Dental Association, Grand Rapids, June.

Minnesota State Dental Association, St. Paul.

New Jersey State Dental Society, Asbury Park, July 16, 17, 18.

North Carolina Dental Society, Raleigh, June 19, 20, 21.

Ohio State Dental Society, Columbus, Dec. 2, 3, 4.

Pennsylvania State Dental Society, Bedford Springs, July 8, 9, 10.

Rhode Island Dental Society, July 8.

South Dakota State Dental Society, Watertown, July 8, 9, 10.

Tennessee Dental Association, Mont Eagle, July 8, 9, 10.

Virginia State Dental Association, Old Point Comfort, Aug. 5, 6, 7.

Wisconsin State Dental Society, Milwaukee, July 15, 16, 17.

Low Rate to Niagara.

The Lackawanna R. R. with their elegantly equipped trains and picturesque road will leave New York from the foot of Christopher and Barclay street, July 24, at 10 a. m., reaching the Falls at 9.10 p. m., and 9 p. m. train, with sleeper attached, reaching the Falls at 8.45 a. m. on the 25th. Dining car with *a la carte* meals attached to each train. In purchasing tickets secure from agent a receipt, as by this method the cost of round trip will be \$10.70.

CHARLES A. MEEKER, D.D.S.,
Committee on Contracts.

National Association of Dental Examiners.

The nineteenth annual session will convene at the International Hotel, Niagara Falls, on Friday, July 25, at 10 a. m., and continue in session until adjournment.

It is earnestly hoped that this session will see a larger representation of delegates than any heretofore held.

Every State is asked to make provision now to send delegates.

Niagara Falls is an ideal place for meeting, and the International Hotel is the best, the service and appointments first class, and the rates will be according to location of the room. Rates from \$3.50 to \$4.50 per day, being a reduction of fifty cents per day from the regular rates.

It is expected the usual reduction in railroad fare will be arranged in time. Additional notice will be given in the July journals.

588 Broad Street, Newark, N. J. J. ALLEN OSMUN, Secy.

New Jersey State Dental Society.

In no one profession has there been so many kaleidoscopic changes in methods as in modern dentistry. The practice of today is succeeded on the morrow by an improved method. The mechanic, the electrician, the chemist, the microscopist, the histologist, the physician, the biologist, and the specialist in the realms of *materia medica* are all called upon to contribute to the needs of the dentist of today. The day has passed when a man may sit in his office and read in a desultory way one dental journal, never visit a dental society, and call himself a dentist. The excellence of the professional man is due mostly to the stimulus of the societies.

With this argument emphasized, we ask you, the great body of ethical and professional men in New Jersey and adjacent states, to mark off the week of July 17 and come to our meeting, and let us give you ocular proof of the object lesson we will present to you in the wonderful exhibit of 1902. Electrical appliances, inlay furnaces, chairs, spittoons, improvements in gold and base metals for operative and mechanical work, new and ingenious instruments for the office and laboratory, porcelain teeth and crowns, and best of all, clinics (many of them) performed before you by eminent operators, that are of more value than a twelvemonth essay of descriptions.

Asbury Park is a pleasant place to visit. The railroad fares reasonable, the hotel rates moderate, the scenery beautiful and the social element all to be desired. To the stranger we say, we will try to make your visit pleasant and profitable.

Last year, seven hundred dentists registered an attendance. This year we look for even a thousand.

The Columbia will be the headquarters from which the "Hornet" flag flies. Proprietor J. H. Jones will try his best to accommodate all who favor him with the request in reasonable time, with the rate of \$2.50 and \$3.00 per day.

The Auditorium, the largest building on the Jersey coast, will be used in its entirety for the exhibits and meetings.

Again we ask you, mark off the time now and meet with us.

CHAS. A. MEEKER, Sec'y,
29 Fulton St., Newark, N. J.

H. S. SUTPHEN, Asst. Sec'y,
24 E. Kinney St., Newark, N. J.

The Connecticut Odontological Society.

The Connecticut Odontological Society will hold its annual meeting at Savin Rock, New Haven, Conn., on Tuesday, June 24, at 2 o'clock p. m.

It has been the aim of the Executive Committee to make this a meeting of unusual interest and instruction. A cordial invitation is extended to all dentists and students to attend.

At the conclusion of the business of the day the reading of specially prepared papers, demonstrations, exhibits, etc., a shore dinner will be served. Applications for dinner tickets should be made to Dr. J. W. Mullery, Hartford, Conn., not later than June 23.

Greenwich, Conn.

CHAS. W. HOWGATE, Secy.

Vermont State Dental Society.

At the twenty-sixth annual meeting of the Vermont State Dental Society, held at Rutland, March 19-21, 1902, the following officers were elected for the ensuing year: President, J. A. Pearsons, Barton; First Vice-President, J. H. Jackson, Burlington; Second Vice-President, H. Burbridge, Woodstock; Recording Secretary, Thos. Mound, Rutland; Corresponding Secretary, Grace L. Bosworth, Rutland; Treasurer, W. H. Munsell, Wells River; State Prosecutor, J. A. Robinson, Morrisville. Executive Committee.—G. F. Barber, Brattleboro; G. O. Mitchell, St. Albans; J. C. Hindes, Vergennes.

The next meeting will be held in Burlington the third Wednesday in March, 1903.

THOMAS MOUND, Secretary.

Rutland, Vt.

Vermont Board of Dental Examiners.

A meeting of the Vermont Board of Dental Examiners will be held at the Pavilion Hotel, Montpelier, Wednesday, July 9, 1902, at 2 p. m., for the examination of candidates to practice dentistry. The examinations will be in writing and include anatomy, physiology, bacteriology, chemistry, metallurgy, pathology, therapeutics, surgery, materia medica, anæsthetics, operative and prosthetic dentistry, together with an operation in the mouth.

Candidates must come prepared with instruments, rubber dam and gold.

Applications, together with the fee, ten dollars, must be filed with the Secretary on or before July 1.

GEO. F. CHENEY, Secy.

St. Johnsbury, Vt.

Wisconsin State Dental Society.

The thirty-second annual meeting of the Wisconsin State Dental Society will be held at Milwaukee, Wis., July 15, 16 and 17. A cordial invitation is extended to all members of the profession to be present.

W. H. MUELLER, Sec'y,

21 W. Main St., Madison, Wis.

North Carolina Board of Dental Examiners.

The North Carolina State Board of Dental Examiners will meet Monday, Tuesday and Wednesday, June 16, 17 and 18, 1902, at Raleigh, N. C. For further information write the undersigned.

R. H. JONES, Secretary.

Winston, Salem, N. C.

Colorado State Dental Association.

The sixteenth annual meeting of the Colorado State Dental Association will be held at the Alta Vista Hotel, Colorado Springs, June 17, 18 and 19.

A good meeting is assured. Special rates at the hotels. A cordial invitation is extended to the profession.

70 Barth Block, Denver, Col.

W. A. BRIERLY, Secy.

Colorado State Board of Dental Examiners.

The Colorado State Board of Dental Examiners will meet in the Capitol Building, Denver, Colorado, Tuesday, June 3, 1902, at 9 o'clock a. m., to examine applicants for license to practice dentistry in Colorado. In addition to written and oral examination, applicants must supply their own patients, instruments and materials, and come prepared to do practical work. All applications must be completed prior to June 3.

For application blanks and information, address

H. F. HOFFMAN, Secretary.

California Bldg., Denver, Colo.

Idaho State Dental Society.

The seventh annual meeting of the Idaho State Dental Society will be held in Nampa, Tuesday, June 10, 1902.

K. C. JOYNER, Sec'y.

Nampa, Idaho.

South Dakota State Dental Society.

The South Dakota State Dental Society will meet at Watertown, S. D., July 8, 9 and 10. Porcelain work with gasoline furnaces will be one of the features of entertainment. Orthodontia will also receive special attention.

Clinics by leading dentists in gold and amalgam filling will be had.
Vermillion, S. D. G. W. COLLINS, Acting Secy.

South Dakota State Board of Dental Examiners.

The next meeting of the South Dakota State Board of Dental Examiners, for the examination of candidates, will be held at Watertown, S. D., July 8, 9 and 10. No applicant will be admitted unless he present satisfactory evidence of having been in active practice of dentistry continuously for at least three years immediately preceding the date of examination, or is a graduate from a reputable dental school.

Applications must be made to the secretary at least one week previous to the date of examination in writing. Candidates must be on hand at 9 a. m., July 8, at Dr. C. W. Stutenroth's office. None will be received later.

Vermillion, S. D.

G. W. COLLINS, Secy.

Pennsylvania Board of Examiners.

The Board of Dental Examiners of Pennsylvania will conduct examinations in Philadelphia, June 24-27, 1902.

For examination papers and further particulars address Hon. James W. Latta, Sec'y Dental Council, Harrisburg, Pa.

Williamsport, Pa.

G. W. KLUMP, Sec'y.

Oklahoma Board of Dental Examiners.

There will be a meeting of the Oklahoma Board of Dental Examiners held in Guthrie May 5th and 6th, for the purpose of examining candidates for license.

Guthrie, Okla.

A. C. HIXON, Sec'y.

The Virginia State Dental Association.

The Virginia State Dental Association will hold its next annual session at Old Point Comfort, Va., August 5, 6 and 7. This follows the adjournment of the National Association at Niagara, and will give a fine opportunity for all desiring to continue their summer outing at most reasonable rates. All members of the profession are cordially invited to attend.

GEO. F. KEESEE, Secy.

407 E. Main St., Richmond, Va.

Virginia State Board of Dental Examiners.

The next meeting of the Virginia State Board of Dental Examiners will be held in Richmond, Va., June 10th.

R. H. WALKER, Sec'y.

Norfolk, Va.

The Chicago Dental Society.

The officers of the Chicago Dental Society for 1902-1903 elected at the annual meeting, held in Schiller Hall, Tuesday evening, April 1, 1902, are as follows: President, Elgin Mawhinney; First Vice-President, H. J. Goslee; Second Vice-President, F. B. Noyes; Secretary, Winthrop Girling; Corresponding Secretary, C. S. Bigelow; Treasurer, E. R. Carpenter; Librarian, H. W. Sale; Member Board of Directors, Edmund Noyes. Board of Censors.—W. V.-B. Ames, Chairman; C. N. Johnson, A. W. Harlan.

C. S. BIGELOW, Corresponding Secretary.

92 State Street.

Tennessee Dental Association.

The thirty-fifth annual meeting of the Tennessee Dental Association will take place at Mont Eagle, Tenn., beginning Tuesday, July 8, 1902, and continuing three days.

A programme of unusual interest both as to papers and clinics has been prepared.

Mont Eagle is a most popular summer resort, so a social as well as a professional treat is in store for those who attend. The railroads have made a one and one-third rate on the certificate plan, and hotel accommodations are up to date and reasonable.

All ethical dentists are invited to be present and take part in the proceedings.

A. SIDNEY PAGE, Secy.

Columbia, Tenn.

Maryland State Dental Association and the District of Columbia Dental Society.

The sixth union meeting of the Maryland State Dental Association and the District of Columbia Dental Society will be held at Washington, D. C., June 6 and 7.

A fine programme has been arranged, and all dentists are cordially invited to attend. Mark off the dates on your appointment book at once.

Harvard Dental Alumni Association.

The place of meeting of the Harvard Dental Alumni Association for the thirty-first annual banquet, Monday evening, June 23, has been changed from Young's Hotel, Boston, to the Harvard Union, Cambridge, Mass.

WALDO E. BOARDMAN, Secy.

184 Boylston St., Boston, Mass.

New Jersey State Board of Registration and Examination.

The New Jersey State Board of Registration and Examination in Dentistry will hold their next examination on the following dates: Monday, July 7th, Tuesday, July 8th, Wednesday, July 9th, at the office of the Secretary, J. Allen Osmun, 588 Broad St., Newark, N. J.

All applicants for examination must have their application in two weeks prior to the examination.

J. ALLEN OSMUN, Sec'y.

588 Broad St., Newark, N. J.

Central Dental Association of Northern New Jersey.

At the regular meeting of the Central Dental Association, held in Newark, March 15, 1902, Dr. Charles A. Meeker presented the following resolution, which the Society endorsed:

Resolved, That the Central Dental Association endorse Bill No. 2,519, before the Senate and House, to add a corps of dental surgeons to the medical service of the navy to serve the officers, enlisted men and boys of the naval, military and training schools of the United States.

FREDERICK W. STEVENS, Secretary.

588 Broad St., Newark, N. J.

European Meetings.

The Second Annual Meeting of the International Dental Federation and International Commission of Dental Education will convene in Stockholm, Sweden, August 15th to 20th, 1902.

On August 12th, immediately preceding the meeting of the Federation, the American Dental Society of Europe will convene. Within the same week the meeting of the International Advisory Boards of the Committee on Foreign Relations of the National Association of Dental Faculties of the United States will meet also. The date of the meeting of the National Dental Association of the United States has been changed to July 28th and the meeting of the National Association of Dental Faculties to July 24th, both at Niagara Falls.

The meeting of the National Dental Association in this country, July 28th to 31st, makes it necessary that we should sail as soon after this as possible. We have decided upon the "Friederich der Grosse," of the North German Lloyd Line, which sails July 31st from New York City. We are due at Bremen August 10th. Different priced berths on the steamer may be had, some good ones as low as \$80.00. These berths will be assigned in the order of registration, 25% of which should be mailed at the time of application. The booking arrangements have been made through A. A. Andridge, Ph.D., Pike Opera Building, Cincinnati. Dr. Andridge's experience, rates, time tables, in addition to his private parties, will be at the disposal of any who write. Further questions, in reference to side trips, extension of tickets, return sailing dates, all remittances, etc., should be sent to Dr. Andridge, while all information about the Associations and their work, programmes, addresses, etc., should be directed to the President.

By the International Commission of Education.

TRUMAN W. BROPHY, President,
Marshall Field Building, Chicago.

MAURICE ROY, Secretary,
5 Rue Rouget de l'Isle, Paris.

CONDENSED ITINERARIES.

Tour "A." 34 Days. \$201.00. *Travel Expenses Only.*—Sail from New York by "Friederich der Grosse," July 31, at 1:00 p. m.; due in Bremen August 10, Stockholm August 12. Leave Stockholm August 21. Sail from Bremen August 23; due in New York September 2.

Tour "B." 48 Days. \$335.00. *All Expenses Except in Stockholm.*—Sail from New York by "Friederich der Grosse," July 31; Bremen, Copenhagen, Stockholm, *Russia* (Abo, St. Petersburg, Warsaw), Ger-

many (Berlin, Cologne, up the Rhine, Bonn, Coblenz, Bingen, Mayence, Strasburg), Paris, London; sail for New York, due September 16.

Tour "C." 72 Days. \$475.00. *All Expenses Except in Stockholm.*—Sail from New York by "Friederich der Grosse," July 31; Bremen, Copenhagen, Stockholm, *Russia* (Abo, St. Petersburg, Moscow, Warsaw), *Austria* (Vienna), *Germany* (Munich), *Switzerland* (Lindau, Zurich, Lucerne, The Rigi—optional—Schaffhausen), *Germany* (Black Forest Ry., Heidelberg, Mayence,—down the Rhine—Cologne,) *Belgium* (Brussels, Battlefield of Waterloo), Paris, London, Stratford-on-Avon, Liverpool; sail for Boston, due October 10.

CORONATION PARTY.

Tour "D." 93 Days. \$735.00. *All Expenses.* Sail from Boston June 16; Liverpool, Leamington, Stratford-on-Avon (Home of Shakespeare), London (during the Coronation of Edward VII), Newcastle, Bergen, Throndhjem, Torgatten, Bodo, Tromso, Hammerfest, North Cape, Land of the Midnight Sun, Svartisen, Throndhjem, Christiania, Stockholm (one week extra expenses), Abo Helsingfors, St. Petersburg, Moscow, Warsaw, Munich, Paris, London, Scotland, Ireland, Queens-town; sail for New York, due September 16.

Address all communications about trips and send all remittances to A. A. Andridge, Ph. D., Pike Opera Building, Cincinnati, Ohio.

